FOCUSED QUESTION
What is the outcome of an outpatient, client-centered leisure group for young adults with high-functioning autism spectrum disorder (ASD) in relation to developing greater leisure interests?


CLINICAL BOTTOM LINE:
A well-balanced leisure lifestyle has been shown to be effective in enhancing overall quality of life. Presently, there is limited research conducted on enhancing leisure skills for high-functioning adults with autism spectrum disorder who live in supported housing or at home with their parents. Typically, individuals with ASD experience difficulty with peer-related activities, which leads to greater time spent doing solitary tasks and less time participating in social activities. Based on the findings of this study, occupational therapists should consider the implementation of group intervention programs that include cognitive–behavioral and client-support strategies to assist high-functioning youth with ASD to improve leisure skills which, in turn, can lead to increased independence and improved satisfaction with quality of life. Because there is limited research in this area, evidence-based research done by occupational therapists who implement these types of programs would add to the body of knowledge for the profession.

RESEARCH OBJECTIVE(S)
List study objectives.

The researchers aimed to 1) minimize need for leisure support, 2) modify existing leisure activities, and 3) enhance overall satisfaction with leisure interests. Through this study, the researchers also intended to measure the perceptions of leisure interests between participants and their families.

DESIGN TYPE AND LEVEL OF EVIDENCE:
Level IIIB: Quasi-experimental, pretest–posttest control group design. The subjects were not randomly assigned to participate in the leisure program or no intervention groups.
Limitations (appropriateness of study design):
Were the study design type appropriate for the knowledge level about this topic? Circle yes or no, and if no, explain.

YES/NO

SAMPLE SELECTION
How were subjects selected to participate? Please describe.

The subjects were recruited through local websites and newsletters for people or relatives of individuals with ASD. The order the subjects signed up to participate determined the intervention group in which they were placed.

Inclusion Criteria
Subjects were required to be between the ages of 16 and 35, have a diagnosis of ASD provided by a licensed psychiatrist according to DSM-IV criteria, have an IQ of at least 85, exhibit difficulties in leisure activities, and have the motivation to change his or her present lifestyle.

Exclusion Criteria
NR

SAMPLE CHARACTERISTICS

<table>
<thead>
<tr>
<th>N = 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Dropouts</td>
</tr>
<tr>
<td>#/ (%) Male</td>
</tr>
<tr>
<td>Ethnicity</td>
</tr>
<tr>
<td>Disease/disability diagnosis</td>
</tr>
</tbody>
</table>

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: Leisure program group
Each group session consisted of 7 main components. The leaders began with a warm-up activity in which the subjects identified leisure activities that occurred throughout the week. The subjects would then discuss their homework assignment and be provided with feedback from other subjects as well as group leaders. The leaders provided a brief introduction into the session and described the leisure activity being discussed. The subjects were allotted time for behavioral practice and feedback through role-playing exercises. The group leaders then instructed the subjects on homework for the following session and provided a brief summary of the group. Subjects identified personal goals they hoped to obtain throughout the sessions. The subjects were educated on the importance of engaging in leisure activities, how to plan and arrange leisure activities, and supports available to help increase participation in leisure activities.

The leisure program took place in the dayroom at a local treatment facility for adults with high-functioning autism. Sessions also took place within the community at local cafés, bowling alleys, and clubs.

Two staff members of the facility where the program was being held led the group sessions. They were supervised by Annemiek Palmen, one of the authors of this article.

The leisure program lasted 6 months and consisted of 15 group sessions.

### Group 2: No intervention control group

<table>
<thead>
<tr>
<th>Brief Description</th>
<th>NR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setting</td>
<td>NR</td>
</tr>
<tr>
<td>Who Delivered?</td>
<td>NR</td>
</tr>
<tr>
<td>Frequency?</td>
<td>NR</td>
</tr>
<tr>
<td>Duration?</td>
<td>NR</td>
</tr>
</tbody>
</table>

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

**Contamination**

YES/NO

**Co-intervention**

YES/NO

**Timing**

YES/NO
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.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Outcome Measured</th>
<th>Reliable/Valid</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need for Leisure Support</td>
<td>Level of support needed to engage in leisure activities.</td>
<td>The subjects rated each question on a 5-point Likert scale from almost never (1) to almost always (5). Higher scores received indicated greater support for leisure management.</td>
<td></td>
</tr>
<tr>
<td>Engagement in Leisure Activities</td>
<td>Participation and variation of leisure activities.</td>
<td>The items were scored on a Likert scale where “Almost never” and “Almost always” were given a 1, “Sometimes” and “Often” were scored a 2, and “Regularly” scored a 3. Higher numbers correlated with the frequency at which the subject engaged in an activity.</td>
<td></td>
</tr>
<tr>
<td>Satisfaction With Leisure Lifestyle</td>
<td>Degree of satisfaction with their leisure activities.</td>
<td>Items were ranked on a 6-point Likert scale from “Very satisfied” to “Very dissatisfied.” The higher the score, the more satisfied the subjects are with their leisure activities.</td>
<td></td>
</tr>
<tr>
<td>Relative Reported Leisure</td>
<td>Similar to previous self-report measures but intended for family member of the subject.</td>
<td>The relatives were asked to complete the questionnaire at pretest and posttest.</td>
<td></td>
</tr>
</tbody>
</table>

Measurement Biases

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

YES/NO

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

YES/NO/NR

Others (list and explain):
RESULTS
List results of outcomes relevant to answering the focused question
Include statistical significance where appropriate (p<0.05)
Include effect size if reported

t tests for paired samples were used to evaluate pretest and posttest differences and independent t tests examined the differences in pre and post changes among the experimental and control groups. Statistical data suggest there was no significant difference between control and experimental groups in regards to the need for leisure support at pretest. Posttest results indicated a greater decrease in the need for leisure support in the subjects who completed the leisure program as compared to those who were in the control group. The results also show the leisure program to be beneficial in decreasing support needed for making leisure choices, arranging activities, and planning leisure tasks. There were no significant changes found for the control group. A higher effect size was found in relation to managing leisure activities for those subjects in the experimental group. The results indicate significant increases in solitary activities and gross motor activities for the subjects in the experimental group as compared to those in the control group. The limited results regarding change in leisure activity patterns indicate the leisure program had minimal effect in this category. Significant statistical evidence suggests the leisure program was effective in increasing overall satisfaction with leisure activities. There was no significant evidence supporting the need for leisure support or engagement in leisure activities on the relative’s questionnaire.

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

YES/NO

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

YES/NO

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

YES/NO

CONCLUSIONS
State the authors’ conclusions that are applicable to answering the evidence-based question.
The results of this study indicate that an outpatient, client-centered leisure program that incorporates cognitive–behavioral techniques is effective in enhancing leisure interests for adults with high-functioning autism. By participating in the leisure program, subjects were more independent in making leisure choices, arranging activities, decreasing boredom, and planning activities to complete throughout the week. The development of a leisure program showed to be both positive and negative for increasing engagement in leisure activities for adults with autism.

This work is based on the evidence-based literature review completed by Taylor Duniven, MOTS, and Gail Bass, PhD, OTR/L, Faculty Advisor, University of North Dakota.


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