Title:
Effects of Activity Group Therapy for Children With ASD on Social Skills and Self-Esteem

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Session Title:
Research Poster Session 1

Slot (superslotted):
RSC PST 1: Friday, 28 July 2017: 10:00 AM-10:45 AM

Slot (superslotted):
RSC PST 1: Friday, 28 July 2017: 12:00 PM-1:30 PM

Keywords:
Activity Group Therapy, Autism Spectrum Disorder and Self-Esteem

References:

Abstract Summary:

The purpose of this study is to clarify the utility of Activity Group Therapy with same interests (Railway) for children with ASD. Comparison of before and after has been carried out on social skills and self-esteem. There are no significant differences but effect sizes were medium to large.

Learning Activity:

<table>
<thead>
<tr>
<th>LEARNING OBJECTIVES</th>
<th>EXPANDED CONTENT OUTLINE</th>
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<tr>
<td>You will be able to find the effects of Activity Group Therapy for children with Autism Spectrum Disorder.</td>
<td>The learner will be able to discuss that how to evaluate Activity Group Therapy for children with Autism Spectrum Disorder.</td>
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<tr>
<td>You will be able to learn the viewpoint of new intervention for children with Autism Spectrum Disorder.</td>
<td>The learner will be able to discuss that how to intervene in children with Autism Spectrum Disorder.</td>
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Abstract Text:

Introduction:

In recent years, there has been an increase in consultation of Autism Spectrum Disorder (ASD) children at medical field. Diagnostic and Statistical Manual of Mental Disorders Fifth Edition (DSM-5) said that the essential features of ASD are persistent impairment in reciprocal social communication and social interaction, and restricted, repetitive patterns of behavior, interests, or activities. Children with ASD suffer from isolation and friendship at school because of their impairment in reciprocal social communication and social interaction. Because they do not understand the difference from typical development children, they deepen the sense of alienation and isolation. In this way, children with ASD cause maladjustment at school and often become school refusal, so the necessity of support is pointed out. Children with ASD are difficult to acquire social skills naturally, so it is necessary to experience various interpersonal experiences and acquire social skills. It is pointed out that self-esteem of Japanese children is lower than that of children of other countries (e.g., United States, China, Korea, Netherlands, Germany, Finland and Turkey). Furthermore, it has been pointed out that children with ASD have lower self-esteem than Japanese typical development children. Therefore, it is necessary to raise self-esteem of these children.

Activity group therapy (AGT) is one of group psychotherapy advocated by Slavson. In AGT, it is possible to express emotions, re-experience early conflict of development, by providing an acceptable environment and playing with groups. We thought that participation in AGT enables children with ASD to experience interpersonal communication and interaction. We thought that in AGT with same interests by utilizing restricted patterns of interests which is one of the essential features of ASD, participants who are not good at interpersonal relationships are easy to participate and can actively participate in group
activities. In addition, we thought when we are carrying out AGT of their interesting theme, they could experience being recognized by others and increase their self-esteem.

In this study, we chose railway as interesting theme. Railway has orderliness, predictability, consistency, arrangement of numbers (e.g., rail timetable), arrangement beauty, symmetry and regularity of tracks and sleepers, and unique driving sound. Because those features are fit in their interests, it is pointed out that railway is very attractive for them. It is also reported that some people with ASD are interested in the railway picture books and some children remember and memorize in the rail timetable in detail. Therefore, we thought that conducting AGT of railway was useful for children with ASD.

**Purpose:**

The purpose of this study is to clarify the utility of AGT with same interests for children with ASD.

**Methods:**

**Subjects**

9 subjects who were inpatients or outpatients at the adolescent psychiatry in Japan were recruited in the present study. They were children with ASD and from 5th-grade to 9th-grade. They participated in AGT of railway, it’s called “RAILWAY FRIENDS”.

**Framework of AGT called “RAILWAY FRIENDS”**

AGT “RAILWAY FRIENDS” was conducted once a week for 1 hour, and it was conducted 10 sessions a course. Until the 9th session, they got conversations and consultations on railway, appreciation of railway magazines and DVD, demonstration and driving of their own railway models at the playroom in the hospital. They went to a day trip outside the hospital using railway at the 10th session. The staff participated in 2 nurses (1 is conductor and 1 is co-conductor), 1 psychologist (co-conductor), and 1 medical doctor (co-conductor). AGT “RAILWAY FRIENDS” period was from August 2014 to January 2016.

**AGT assessment**

In order to verify the utility of AGT "RAILWAY FRIENDS", we conducted a self-administered questionnaire survey before and after AGT "RAILWAY FRIENDS". The questionnaire we used was a Basic Communication Skills Scale for Junior High School Students for measuring social skills and a Japanese version of the Rosenberg Self-Esteem Scale for measuring self-esteem. A Basic Communication Skills Scale for Junior High School Students has 24 items and 4 subscales (Behavioral Expression, Emotional Regulation, Cognitive Decoding, and Cognitive Monitoring). A Japanese version of the Rosenberg Self-Esteem Scale is 10 items and one factor. Demographic information (age, gender, grade, and the treatment situation) was investigated from medical record in the hospital.

Wilcoxon signed-rank test were used to detect the difference before and after AGT “RAILWAY FRIENDS”. The Statistical Package for Social Sciences (SPSS) version 22, at the 95% confidence level was used.

**Ethical consideration**

This study was approved by Ethics Committee of University of Tsukuba Faculty of Medicine, and Research Facility. Informed consent was obtained from participants and their guardian caregivers before the initiation of any research procedures.
Results:

The subjects are 2 elementary school students and 7 junior high school students, 5 inpatients and 2 outpatients, and all boys. The average attendance rate of the participants was 93.3%.

Univariate analysis showed no significant difference in social skills (before AGT: $M=44.78$ SD=$10.97$, after AGT: $M=48.44$ SD=$8.02$, $p=.057$), and the effect size was large ($r=.634$). In the subscale of social skills, there were no significant differences in Behavioral Expression (before: $M=16.33$ SD=$4.72$, after: $M=18.11$ SD=$3.59$, $p=.172$), in Emotional Regulation (before: $M=11.11$ SD=$3.62$, after: $M=10.56$ SD=$2.65$, $p=.670$), in Cognitive Decoding (before: $M=7.33$ SD=$2.35$, after: $M=8.22$ SD=$2.17$, $p=.074$), and in Cognitive Monitoring (before: $M=10.00$ SD=$4.03$, after: $M=11.56$ SD=$2.74$, $p=.104$). Effect size in Behavioral Expression is medium ($r=.455$), in Emotional Regulation is small ($r=.142$), in Cognitive Decoding ($r=.595$) and in Cognitive Monitoring ($r=.542$) are large. There is no statistically significant differences in Self-Esteem (before: $M=22.78$ SD=$6.85$, after: $M=26.44$ SD=$4.64$, $p=.065$), and effect size is large ($r=.614$).

Discussion:

In this study, there are no statistical differences in social skills and Self-Esteem. However, because the significant difference is influenced by the sample size, in this study, the number of subjects was 9, which was considered to be related to this result. On the other hand, since the effect size does not change depending on the sample size, it can be considered that the effect of this research can be examined by the effect size.

It was suggested that participation in AGT "RAILWAY FRIENDS" improves social skills. Considering from effect sizes of Cognitive Decoding and Cognitive Monitorin are large, it was thought that they could think about the thought of others and themselves by participating in AGT "RAILWAY FRIENDS" and interacting with members of the same interest. Also, in Behavioral Expression effect size is medium, it was thought that participating in AGT "RAILWAY FRIENDS" and having experience of communicating one's own thoughts to others makes it possible to appropriately convey their feelings and thoughts to the others. It is pointed out that improving self-esteem is not so easy, but in this study, effect size of self-esteem is large, it was thought that it was possible to improve their self-esteem by participating AGT "RAILWAY FRIENDS". In this AGT "RAILWAY FRIENDS", attention was focused on the subject's interests, which is a feature of ASD, and we conducted activities using those characteristics. Therefore, it was thought that their self-esteem was improved as a result of using the biological elements of participants with ASD, performing their favorite activities with others and getting positive feedback.

Conclusion:

The purpose of this study is to clarify the utility of Activity Group Therapy with same interests (Railway) for children with ASD. Comparison of before and after has been carried out on social skills and self-esteem. There are no significant differences but effect sizes were medium to large.