

Employing Tabletop Role-Playing Games (TRPGs) in Social Communication Support Measures for Children and Youth with Autism Spectrum Disorder (ASD) in Japan: A Hands-On Report on the Use of Leisure Activities

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Abstract

This paper presents two studies on promoting social communication and leisure satisfaction of children and youth with Autism Spectrum Disorder (ASD) through the use of tabletop role-playing games (TRPGs). The first study involved four junior high school students with ASD, and focused on “intentional speech directed to other children” and their “consensus-making” during TRPG play sessions. The results of the analysis suggest that intentional speech as well as the ability to reach consensus increased remarkably between the 14th and the 1st session.

The second study investigated the efficacy of leisure activity using TRPGs to enhance the quality of life (QOL) of children and youth with ASD. Fifty-five teenagers with high-functioning ASD participated in the study and responded to the standardized “Questionnaire for Measuring Quality of Life” before and after the TRPG activities. After a total of five sessions once a month significant improvement in the total scores and most of subscales of QOL could be observed. The subscales of “emotional well-being” and “friends” in particular, improved remarkably. These findings suggest that leisure activities using TRPGs have the potential to promote social communication and enhance QOL in children and youth with ASD.

Keywords: Autism Spectrum Disorder (ASD), tabletop role-playing games (TRPGs), communication support, leisure activity support, quality of life (QOL)

要約

本研究では、TRPG 活動を通じた自閉スペクトラム症のある子ども・若者（ASD 児者）自身の社会的コミュニケーション支援の効果および TRPG 活動の余暇活動としての満足度とその意義と可能性について検討することを目的とした。第 1 研究では、ASD 児 4 名を対象に TRPG を実施し、初期の活動と最後の時期の活動での会話内容を比較した。その結果 TRPG 場面で ASD 児たちの自発的な発話が有意に促進されていることと TRPG 中の話し合い場面での合意形成の数に明らかな増加がありポジティブな変化が見られたことが明らかになった。

また第 2 研究では、TRPG 活動に参加した ASD 児者 51 名を対象に TRPG 活動実施の前後に QOL 尺度への回答を求めた。その結果、QOL 総得点およびすべての下位因子で得点が伸び、TRPG が ASD 児者にとって満足度の高い余暇活動で、QOL 向上にも影響があることが明らかになった。また、ASD 児者 10 名に面接調査を行ったところ、彼らが TRPG 活動に満足しており、TRPG を通じた自身のコミュニケーションの変化を自覚していることも明らかになった。TRPG 活動は ASD 児にとって満足度の高い活動であり、活動を通じて彼らの社会的コミュニケーション促進する可能性が示唆された。

キーワード：自閉スペクトラム症 (ASD)、テーブルトーク・ロールプレイングゲーム (TRPG)、コミュニケーション支援、余暇活動支援、生活の質 (QOL)

日本語読者への注

本稿について日本語で概要を知るには、加藤ら(2012)、加藤ら(2013)、加藤ら(2016)を参照のこと。

1. Introduction

Autism spectrum disorder (ASD) is a neurodevelopmental disorder characterized by qualitative impairments in social interaction and communication, as well as restricted, repetitive behaviors, activities, and/or interests (American Psychiatric Association 2013). Among these characteristics, difficulties with social

communication are often described as a core deficit of ASD (White, Keonig, and Scahill 2007).

ASD is a congenital disorder with symptoms presenting from early childhood and affecting daily life functions. However, ASD is often misunderstood as a lack of effort of the afflicted or as a mental sickness of the child caused by the mother when the child grew up.



Currently, special education for children with ASD, ADHD (Attention-Deficit / Hyperactivity Disorder), and SLD (Specific Learning Disorder) is one of the major topics at school sites in Japan. Much attention focuses on how children with ASD have difficulties with social communication and participating in group activities with people of the same age. Without support, children and youth with ASD may suffer from the following difficulties, among others (1) Initiating, maintaining and developing a conversation, (2) inviting classmates over to play, (3) joining group activities (4) keeping up with a game or understanding its rules (Bailey 2007). Improving social communication skills of children with ASD is a challenge of vast importance in contemporary education.

So-called social skills training (SST) ranks high among measures employed to support social communication of children with ASD. SST is a specific intervention that intends to help children and adults improve their social skills so they can increase their social competence. This intervention involves teaching specific communication skills through behavioral and social learning techniques. SST has been used as an intervention approach for children and youth with ASD since the 1980s (Mesibov 1984). SST support for children with ASD includes various approaches for individual but also small group support (Bauminger 2002; Tse et al. 2007; Frankel et al. 2010).



Fig. 1: A group playing TRPGs.

However, Rao, Beidel & Murray (2008) suggest that there are few studies about SST programs for children and youth with ASD that indicate generalizable therapeutic effects. In addition, Koenig, De Los Reyes, Cicchetti, Scahill & Klin (2009) show that interpersonal interactions are multi-dimensional and complex, so social communication support for children with ASD should be comprehensive and tailored to individual

needs. Consequently, the authors suggest a necessity to develop alternative programs that encourage learning of social communication for ASD (2008). In addition, it is difficult for ASD children to use their conversation skills on a daily basis simply by providing training-based communication support that teaches routine methods. Therefore, it is important to foster motivation to communicate with children with ASD.

Meanwhile, taking a slightly more play-minded perspective with less a focus on strict training, support for social communication of children and youth with ASD based on leisure or hobby activities has attracted attention in recent years. Oi (2005) posits that experience with small group activities where all participants show the same disorder characteristics are vital for the growth of social communication skills of children with ASD. Many studies of support measures for individuals with ASD based on leisure activities focus on group participation, stress coping, and quality of life (QOL). García-Villamizar & Dattilo (2010) suggest that participation in recreational activities positively influences the stress, QOL, and social interactions of adults with ASD. Furthermore, several studies conducted in Japan practice report about social interaction support through leisure activities that include hobbies and interests of young people with ASD. Nitto, Yurugi, Takebe & Honda (2011) reported based on follow-ups that 56% of children's friendships were maintained as a result of implementing a common hobby-based friendship program for children with ASD. Kato, Iwaoka & Fujino (2019) suggest that leisure activity support for children and youth with ASD using "hobby talk activities" can be effective to promote interaction among participants depending on the method of conversation analysis.

Kato, Fujino, Itoi & Yoneda (2012) demonstrated the importance of approaches and environment designs focusing on the children's spontaneity and interests. In order to achieve this, we adopted the leisure activity tabletop role-playing games (TRPGs) as programs to fit these conditions. TRPGs are interactive games in which a small group of players creates a fictional story using only pencils, paper, dice, and conversation. Players determine the actions of their characters based on their personalities, backgrounds and through role-playing. These actions succeed or fail according to a formal system of rules and guidelines (Figure 1, Figure 2).

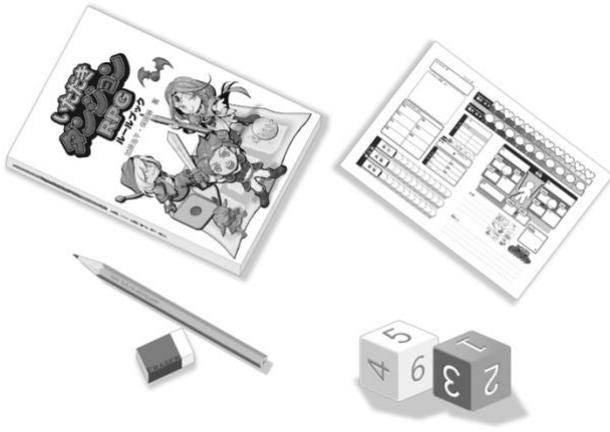


Fig. 2: Tools used to play TRPGs (rulebook, character sheet, pencil, dice).

TRPGs are utilized in education and development support. Karwowski & Soszynski (2008) described how role-playing training increased the creative thinking ability of college students. Chung (2013) reported that a group of TRPG players had a higher divergent thinking value than groups not playing as a result of a creativity test for adults who are playing TRPG and who are not playing. His results suggested that TRPG may promote the creativity of their players. Rosselet & Stauffer (2013) detail a therapeutic approach using TRPGs to train social and emotional self-regulation skills in gifted children and adolescents. Robinson introduces TRPG research and practices on the web from the perspective of recreational therapy for children and adults with disabilities and handicaps (<http://rpgresearch.com>). The *Game to Grow* therapeutic social skills groups primarily use TRPGs to help teens build tangible social skills (<https://gametogrow.org>).

Over the past decade, I have been engaged in TRPG leisure activities for children, adolescents and adults with ASD for research and support purposes [Katō et al. (2012); Katō, Fujino, and Yoneda (2013); Katō and Fujino (2016); <https://sunpro8.wixsite.com/sunpro>]. This paper presents the results of promoting social communication and leisure satisfaction of children and youth with ASD through TRPGs.

2. First study: Promoting social interaction among children with ASD through TRPGs

(1) Purpose – There have been numerous reports on social communication support and social skill development using TRPGs for children and youth with or without disabilities. However, there are no studies involving the quantitative and qualitative analysis of the effects of TRPGs targeting developmental disabilities, least specifically concerning individuals with ASD. This study used TRPGs for examining the effect of spontaneously

promoting social interaction and consensus-making among children with ASD in small-group activities.

(2) Methods – Four children (two male, two female) with ASD in an outpatient clinic (ages: 13-14, average FIQ¹ score: 117.5) participated in TRPG activities (total 16 sessions). A transcript was made from an audio recording of the 1st and 14th sessions.

The utterances of children were coded and counted as “intentional speech directed at other children” or “speech not directed at other children” (e.g., speech delivered through the GM or support staff, monologue, and so on). In addition, “making decisions as a group through negotiation among members” was defined as “consensus-making” and respective instances during the discussion scene in TRPG sessions were counted. Bishop and Adams (1989), Nitto et al., (2011), and Akita (2000) were used as reference for classification and coding.

(3) Results – The rate of “intentional speech directed at other children” was 36.7% in the 1st session and 52.4% in the 14th session (figure 3). It significantly increased in the 14th session ($p < .001$, Fisher’s exact test).² The number instances with “consensus-making” was zero in the first session and five times in the 14th session, i.e., it significantly increased in the 14th session (Figure 4). Furthermore, the manner of the “consensus-making” also changed qualitatively. The 1st session primarily featured decision-making by majority, whereas the 14th session demonstrated logical discussions by listening to the other children’s opinion.

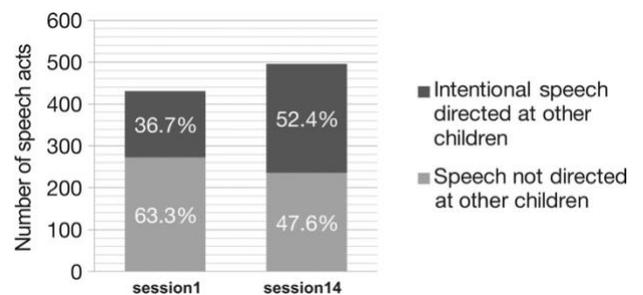
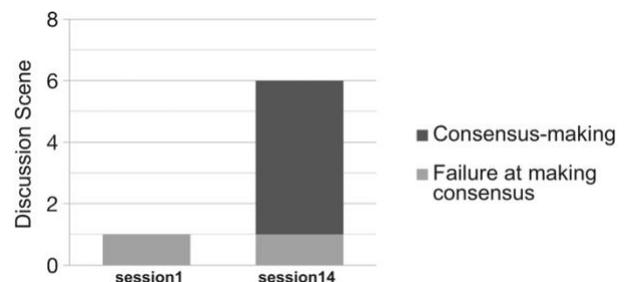


Fig. 3: Change of “intentional speech directed at other children.”

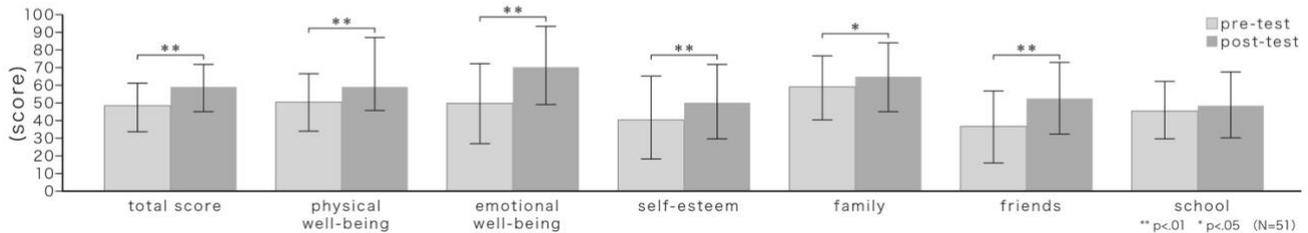


¹ A full intelligence quotient (FIQ) is a total score derived from several standardized tests designed to assess human intelligence.

² Statistical test method used for the analysis of data classified into two categories.

	pre-test(SD)	post-test(SD)	t	p	r	effect size
total score	46.96 (13.43)	59.07 (13.33)	-5.82	p<.01	0.64	large
physical well-being	50.00 (16.20)	66.30 (20.88)	-4.80	p<.01	0.56	large
emotional well-being	49.14 (21.83)	71.08 (22.18)	-5.57	p<.01	0.62	large
self-esteem	41.42 (21.72)	50.86 (21.72)	-2.94	p<.01	0.38	medium
family	58.70 (17.90)	64.83 (18.91)	-2.34	p<.05	0.31	medium
friends	36.64 (20.77)	52.57 (20.28)	-4.62	p<.01	0.55	large
school	45.83 (16.75)	48.77 (18.67)	-1.04	ns	0.15	small

(N=51)



**p<.01 *p<.05 (N=51)

Fig. 4: Change in “consensus-making.”

Fig. 1: Mean scores on the subscales in QOL.

(4) Conclusion – The characteristics of ASD are notable in behavioral difficulties, such as forming friendships or making conversation with children of the same age (Attwood 2008), as well as the exchange of communication roles and an inability to participate in pretend play (Wing 2003). In the first session, children directed few intentional speech acts at other children, resulting in many one-sided communications, and unsuccessful consensus-making. However, as the activities continued, the interaction between the participating children increased. During discussions, participants became able to listen to the opinions of others and to smoothly reach consensus.

The results suggest that small-group activities using TRPGs promote intentional communication and cooperative interaction among children and youth with ASD. Characteristic structural elements of TRPGs (clarification of roles, indirect communication through a character and so on) might be the factor responsible for the effectiveness of this intervention.

3. Second study: Do activities involving tabletop role-playing games enhance the quality of life in children with autism spectrum disorder?

(1) Purpose – We focused on small-group activities involving TRPGs as a method for promoting social interaction among children with ASD. Previous studies have shown that leisure activities such as TRPG promote intentional communication and cooperative interaction among children with ASD. This study investigated the efficacy of TRPG activities to enhance QOL in children with ASD.

(2) Methods – The participants were 51 teenage children (forty-one male and ten female) with ASD (average chronological age: 14, average

FIQ score: 101). We used the Japanese version of

the Kid-KINDL Questionnaire in this study.³ The participants answered the questionnaire before and after participation in five sessions of activities involving TRPGs. The amount of change in the scores before and after the intervention period was statistically compared using a t-test.⁴ In addition, interview surveys were conducted with ten children (seven male and three female) with ASD (average chronological age: 14.9, average FIQ score: 112.5) to hear their impressions about TRPGs.

(3) Results – There was a significant improvement in the total scores of QOL. The effect size (r) of the subscales in each outcome measure were as follows: ‘physical well-being’ 0.56 (large); ‘emotional well-being’ 0.62 (large); ‘self-esteem’ 0.38 (medium); ‘family’ 0.31 (medium); ‘friends’ 0.55 (large) and ‘school’ 0.15 (small), see figure 5.

Then, in an interview survey of children with ASD, there were comments such as “After experiencing TRPG, I have enjoyed talking more than before” and “I think TRPGs have more options for what we can do than in everyday life.” amongst others (Table 1).

(4) Conclusion – These results suggest that leisure activities involving TRPGs have the potential to enhance QOL (particularly, ‘emotional well-being’ and ‘friends’) and relationships with peers of teenagers with ASD. Furthermore, it was suggested through interviews that children and youth with ASD are learning appropriate strategies and skills for social communication and interpersonal relationships while enjoying TRPGs. Additionally, they were aware of positive changes in their own communication skills through TRPGs.

³ Self-assessment questionnaire measuring the quality of life (QOL) of children and adolescents.

⁴ Statistical test method used to assess, whether the means of two groups are statistically different from each other.

Table 1: Comments from children with ASD (partial excerpts)

- The role of my character was different from myself in real life. However, I was satisfied with the thought that “I can only do this role.” (15, male)
- When I was in a character crisis during sessions, other characters helped me. Even if one of the parties failed, other members supported him in TRPGs. (15, male)
- TRPGs are continuous laughing activities. Interaction between players, other players and GM creates laughter. (15, male)
- I think TRPGs have more options for what we can do than in everyday life. (14, male)
- TRPGs have a high degree of freedom. It’s great that we can try through our character what we want to do in role play. (14, male)
- Even if my character’s action failed, I enjoyed the action as one of the story events. (15, male)
- Apart from the fun of TRPG, I enjoyed communicating with other players. (14, female)
- I feel that the relationship between TRPG players and characters is not “equal” or “not equal” but “nearly equal.” (15, male)
- After a session, we were able to chat about the events and role-playing in the scenario. That experience enabled me to be able to speak naturally. (18, male)
- After experiencing TRPGs I have enjoyed talking more than before. (17, female)
- I enjoyed the sensation of thinking during the adventure, that “at first glance, we may not be companions, but actually we are.” (13, female)
- Unlike computer games, TRPGs allow for fun talking because real participants are there. (15, male)

(phrases in brackets show age and gender of interviewees)

4. Summary

Currently, the limitations of training-type communication support for ASD represented by SSTs become apparent. Subsequently, support for interpersonal relationships and social communication through leisure activities garners attention.

Leisure and hobby activities are the basis for forming friendships among children and youth with ASD and promote their communication proficiency. However, simple conversation about a hobby rather feeds into disability characteristics of ASD, such as one-way communication, narrow range of interests, etc. (Shimizu 2004; Ōi 2005).

TRPGs function differently than colloquial talks. From our research and practice so far, we hypothesized that TRPGs contain elements that promote interpersonal relationships and social

communication among children and youth with ASD: (1) rules and settings as a framework of the activities, (2) clarification of common goals and roles, (3) indirect communication through a character (Katō et al. 2012).

The results of previous and our current research have shown that TRPGs promote communication (intentional speech and consensus making) and increases scores of QOL for children and youth with ASD. In addition, we were able to obtain answers that supported our hypotheses in the interview survey of the second study.

There are many misunderstandings concerning ASD, and those who suffer from the disorder and their families are often the victims of stereotyping and biases. For example, it is generally said that “children and youth with ASD are not good at communication,” “individuals with ASD hate group activities.” However, they are not necessarily poor at group activities and social communications.

If the form of environment and support matches a child, they enjoy spontaneous conversation and interaction, and freely demonstrate their unique and prosperous creativity. I am convinced of the effectiveness of leisure activities for children with ASD involving TRPGs, that we conducted as part of my research.

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