Journal of Neurodevelopmental Cognition

Journal of Neurodevelopmental Cognition 4 (2021) 46-48
ISSN: 2645-565X
http://www.jncog.sbu.ac.ir

Develop a "Carpet Weaving" Plan for Adolescents with Autism Spectrum Disorder

Vahid Sani, Hamidereza Pouretemad *, and Saeid Sadeghi

Institute of Cognitive and Brain Sciences, Shahid Beheshti University, Tehran, Iran.

1. Background

The use of arts and handicrafts with the aim of education and rehabilitation for individuals with special needs has a history of about half a century. Although, the carpet industry has not yet been utilized for these purposes. This study aimed to investigate the effectiveness of carpet waving in improving cognitive and social skills, as well as the quality of life for individuals with autism. To achieve this goal, it is crucial to develop and validate a carpet plan according to the cognitive and behavioral characteristics of adolescents with autism.

2. Methodology

As a first step, we reviewed the literature to develop plans for adolescents with autism. Plans were developed and validated based on the following five criteria:

1. Cognitive characteristics of individuals with autism: local and global processing, weakness in abstraction and generalization, systematic thinking.
2. Cognitive preferences of individuals autism: interest in geometric shapes.
3. Behavioral characteristics of individuals autism: Restricted and specific disorder.
4. Color preferences of individuals with autism: The use of colors that differentiate the shape from

* Corresponding author
Email addresses: pouretemad.h@gmail.com
Received: September 2021 *Revised:* December 2021

the background, even if the product is different from the common commercial products.

5. The principles of rehabilitation: The carpet plans should be devised in a way that at the end of each session, individuals receive feedback on the progress they have made.

The psychometric properties of the developed plans were analyzed. We calculated the index of content validity (CVI) and the content validity ratio (CVR) to assess content validity. An expert panel evaluated the validity of the scale. Our expert panel consisted of 11 professionals with research experience or work in the field.

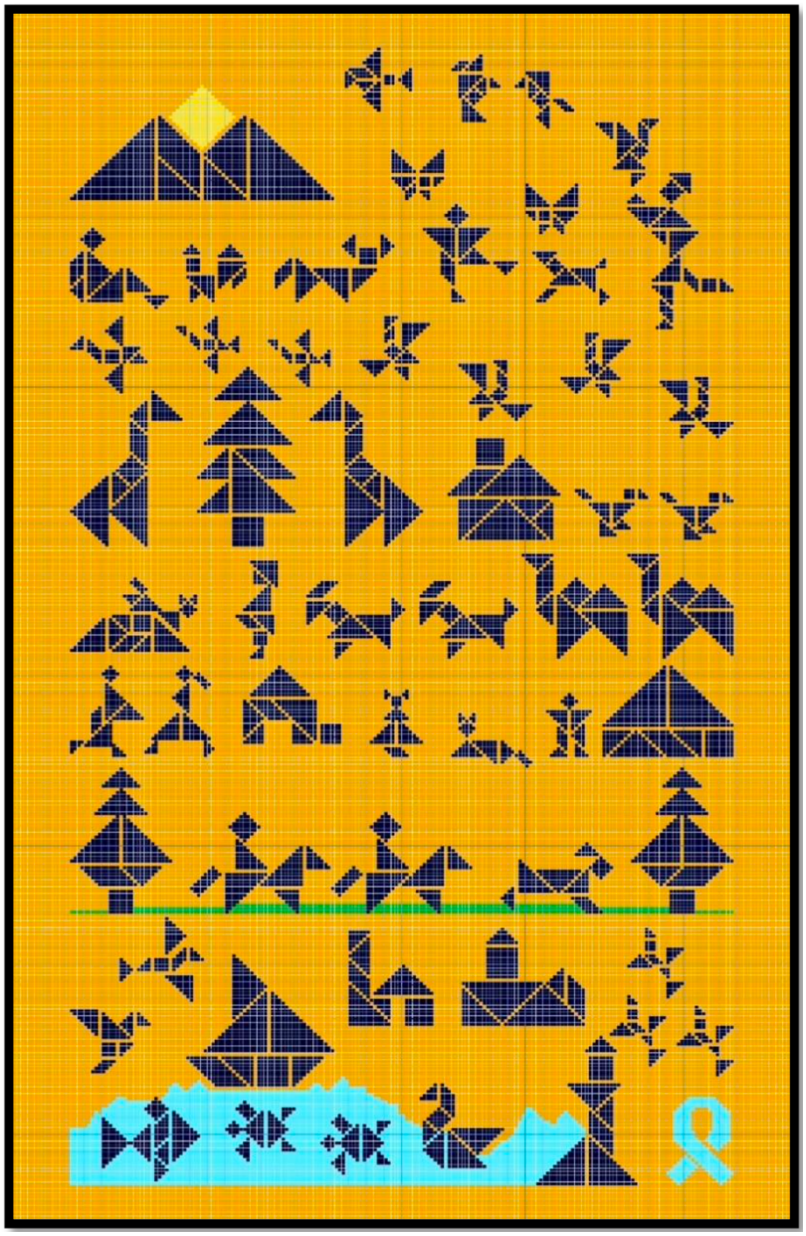

Figure 1. Developed carpet plan.

3. Findings

Based on the above features, carpet plans with small and significant geometrical components in the form of larger geometric designs which were placed on a colored background were prepared (See Figure 1). The plans contained rhythm and reproducibility features that could depict the upgradation steps of partial to total.

According to experts' evaluation, the total validity index of the five components considered in the planning design is S-CVI/UA=0.83 to and S- CVI=0.975. These results show that the developed plan has a high content validity index (CVI= between 0.91 to 1). Also, the content validity ratio (CVR) for all components (except for the second component) was from 0.82 to 1, which shows the content validity of developed plans.

4. Conclusion

Developed plans have a high content validity index and can be applied in a clinical trial.