

## Personalized Enjoyment Questionnaire (PEQ): Exploration of the usability of a new self-report tool for children with autism spectrum disorder (ASD) in relation to motor skill performance

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### Background

- The PEQ is a new tool developed to assess the enjoyment of performing the game-based skills in the *Ignite Challenge*<sup>1</sup> motor assessment for children with ASD
- The PEQ is a 10 cm visual analog scale that uses child-personalized pictorial anchor points
- It is based on common pain rating scales that use happy-sad faces response scales (e.g., Wong-Baker FACES Scale), however, takes into consideration the unique challenges that children with ASD may experience interpreting facial expressions

### Purpose/Hypotheses

To assess the usability of the PEQ in children with ASD aged 6 to 12 years within the Autism Classification System of Functioning: Social Communication (ACSF:SC)<sup>2</sup> levels 1 through 3 (where level 3 means that the child makes few attempts to react or respond to communication from less familiar people).

### Participants

- 28 child participants with ASD (mean age = 9.1 years; 6 female) completed the 13-item *Ignite Challenge*, followed by the PEQ.

#### References:

1. Evans K.E., Wright A., Bauve C., Wright F.V. (2021). Initial validation of the Ignite Challenge for children and youth with Autism Spectrum Disorder. *Developmental Medicine and Child Neurology*, 63(S3); 14.
2. Craig, F., Crippa, A., Ruggiero, M., Rizzato, V, Russo, L., Fanizza, I., & Trabacca, A. (2021). Characterization of Autism Spectrum Disorder (ASD) subtypes based on the relationship between motor skills and social communication abilities. *Human Movement Science*, 77, 1- 10. DOI: 10.1016/j.humov.2021.102802.

## What did we learn?

The Personalized Enjoyment Questionnaire shows strong promise to be a useable tool for measuring the enjoyment of individual physical activities for children with ASD.

## What's next?

The reliability and validity of the PEQ needs to be evaluated

Then we can explore its application to rating enjoyment of other activities beyond the *Ignite Challenge* and in other settings: e.g., in school physical education, school classrooms, physiotherapist appointments, etc.

## Example of the PEQ

- In Figure 1, the participant drew a car ride in the anchor box at 10 cm (likes), school in the 5 cm anchor box (doesn't love but doesn't hate), and kids fighting in the 0 cm box (does not like)

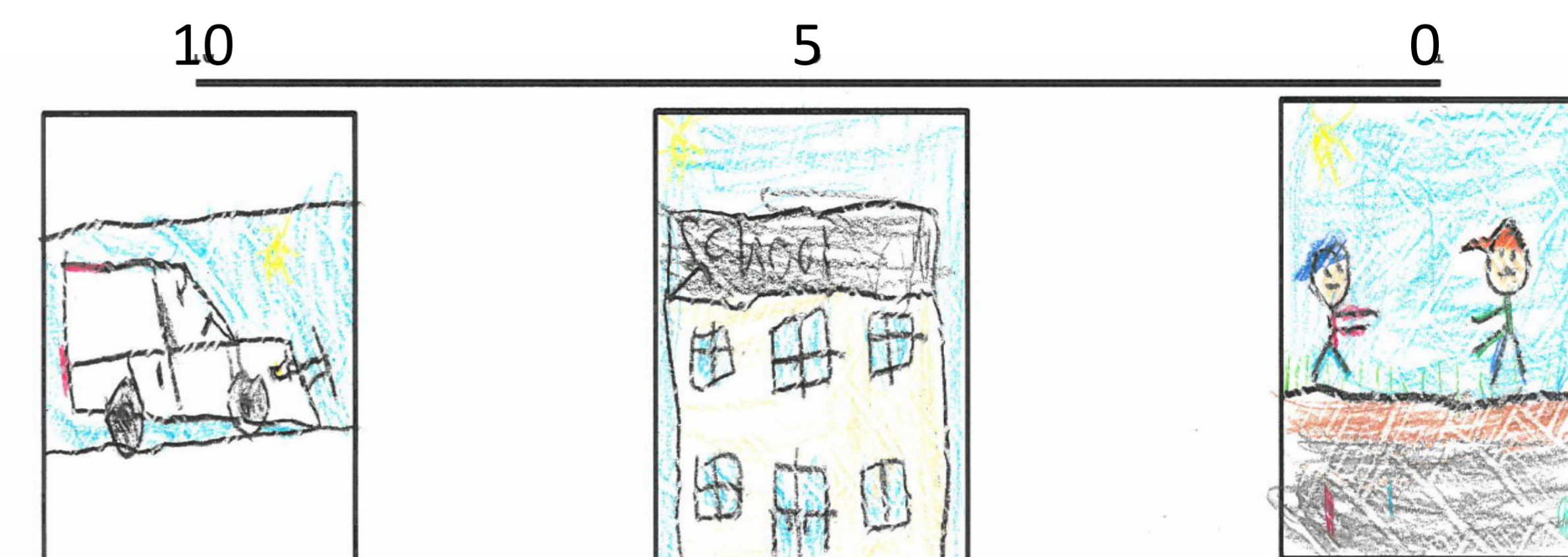


Fig 1: Example of a completed PEQ based VAS

## Results

- The images that participants drew were diverse in nature, i.e., people, activities, sounds and concepts
- 20 participants scored using the full VAS; 3 chose to score it on a 3-point scale (10, 5, or 0); and 5 were unable to use it
- Participants used their creativity to draw their anchor points in multiple colours (n = 12), 1-2 colours (n = 8), or in words (n = 3)

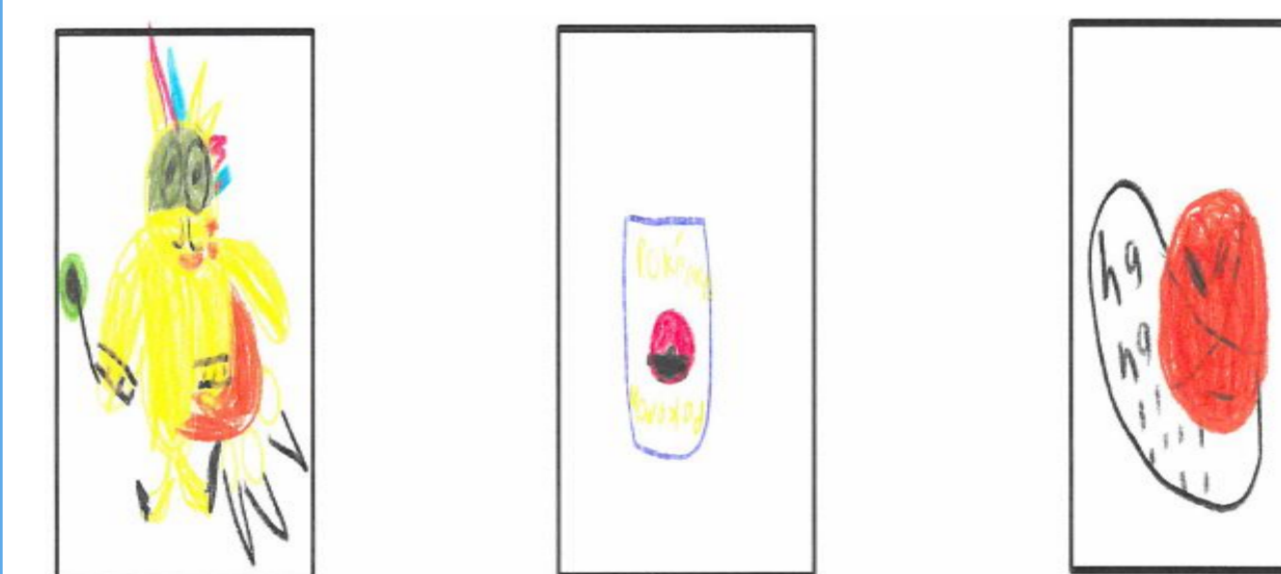
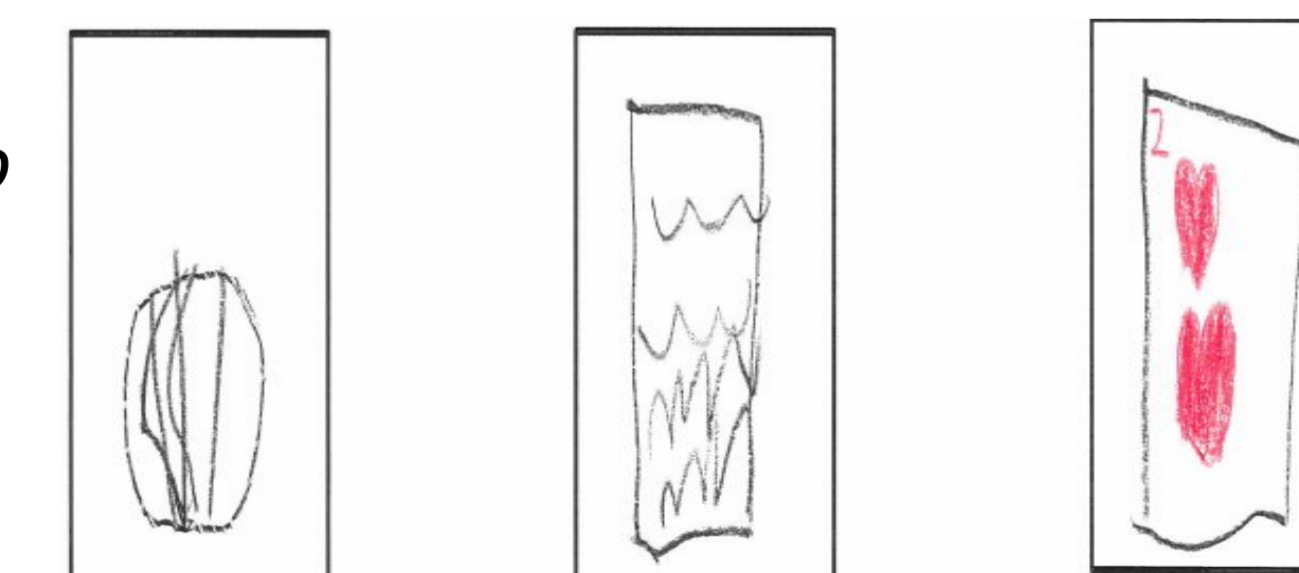


Fig. 2: A completed PEQ VAS with multiple colours  
10 cm = favourite toy; 5 cm = Pokémon card; 0 cm = laughing basketball (because other kids laugh at him when he plays basketball).

Fig. 3: A completed PEQ VAS with two colours  
10 cm = Basketball; 5 cm = Writing a test; 0 cm = Card games



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