Increasing the creativity of children with Autism Spectrum Disorder through making handicrafts from paper waste

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ABSTRACT--Nowadays, the number of children with autism that economically cannot support their self is relatively high. It happens because they lack of creativity to do something which can fulfil their financial needs. In addition, there is no enough facility which can improve their skill and independence. One of the ways to improve their skill is increase creativity by making the handicrafts. Therefore, community engagement Universitas Indonesia team organized the workshop for children with autism to learn how to make some handicrafts from paper waste. This workshop can be a place to upgrade their creativity, self-confidence, and independence. There were 21 participants from Rumah Terapi Putra Fitri foundation and Rumah Autis Bekasi foundation were joined the workshop. All of the participant interest and can make various handicraft by themselves.

Keywords-- autism, creativity, handicraft, paper waste

I. INTRODUCTION

Autism is a neuropsychiatric disorder symptomized by social communication deficits and behaviours patterns that are stereotyped associated with genetic component (Lord, *et al.* 2018). Autism has the most rapidly increasing prevalence rate of any disability; hence it needs to be implemented high-quality education to increase their ability (Odom, et al. 2013). Autism clearly one of the most common developmental disabilities with onset prior to age 3 years (Jensen, et al. 2011). Autistic creative are unique assets according the way they think differently (Shifrin 2019).

Every child with autism will experience growth and maturing, so there will be increasing of autistic adults each year. Considering this, it is crucial to prepare attention, make a transition design, and design a coaching model so that all children with autism (ASD) can transition into people who are independent and can survive in society. In an attempt to help children with autism spectrum disorder (ASD) learn the paper waste creativity, Universitas Indonesia team organized workshop to make handicrafts from paper waste.

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Program Kemandirian Autiscare 2019 is an activity that aims to provide attention, made a transition design, and builds a coaching model by making handcraft from paper waste and colouring with watercolours to ASD children. This activity was carried out at RPTRA Kebagusan, South Jakarta and the Universitas Indonesia. Participants who participated in this workshop were 22 participants from the Putra Fitri Foundation and the Bekasi Rumah Autis Foundation with an age range of 7-16 years. A total of 20 volunteers registered to become assistants of ASD. This workshop is a continuation of the Program Kemandirian Autiscare 2018 held in Sentul.

The objective of Program Kemandirian Autiscare 2019 is to encourage the confidence of the ASD, so as to provide independent space and work space. In this case, community care and well-being of ASD are related aspects and also give positive feedback to each other. The direct impact of this goal is the creation of ASD which can refer its quality in community. ASD are able to be creative making many kinds of handicrafts that have a value from waste paper.

II. METHODS

The method used in this workshop is direct inclusive participation by grouping division based on the number of volunteers (hereinafter referred to as a mentor) so that a group containing one to two ASDs is obtained. Before making handicraft, the workshop mentors demonstrate materials needed and how the work is made. The ASD followed the mentors' demonstration and then practiced it to make crafts according to their own creations also the ASD is free to be creative using various watercolours to decorate their handicraft. During the making and colouring of handicrafts, the mentor approach is carried out by sharing and interacting together with ASD.

The activity carried out at the Universitas Indonesia was a flower craft workshop. As with handicraft workshops from waste paper, the total mentors and participants are divided into small groups and together make flowers from coloured paper. Motor skills and ASD concentrations were trained in this workshop because paper-making flowers require more concentration that paper waste handicrafts. The workshop ended with an evening walks between the mentor and ASD in the Universitas Indonesia area.

III. RESULTS AND DISCUSSION

The role of people who are close enough to the ASD is needed during the event, such as role of parent, friend, and good surroundings (Asrizal, 2016). During process of making crafts, ASD mostly feels pleased, get interest, and focus. However, there is ASD who have difficulty in while making crafts, did not want to communicate and work together. It happened because ASD tend to be difficult to do social relationship with others and chose separately from their group (Rokhaidah, 2018).



Figure 2: Result of handicrafts

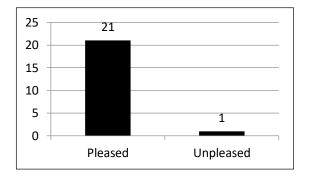
After the process of making crafts is complete, participants are asked questions in the questionnaire. The question is such a testimonial question regarding the activities of making the handicraft. The data collected is non-parametric and tabulated for publication purposes.



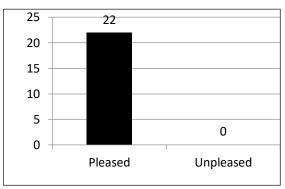
Figure 3: All participant



Graph 1: Ease of making crafts



Graph 2: Participants' feeling during the event



Graph 3: Usefulness of the event

Based on the data obtained, 18 ASDs considered that the handicraft workshops conducted were easy for them to practice, 2 still had to be assisted, and 2 considered it difficult. Based on the data obtained, 21 ASDs were happy with the workshop and all participants found the workshop is useful.

IV. CONCLUSION

Autism clearly one of the most common developmental disabilities. Children with autism spectrum disorder (ASD) need help to be able transition into people who are independent and can survive in society. Program Kemandirian Autiscare 2019 is an activity that aims to provide attention, made a transition design, and builds a coaching model by making handcraft from paper waste and colouring with watercolours to ASD children. During the event, mostly ASD feels happy, able to follow the instructions well, this event is beneficial for them, and they are able to making crafts that have a value.

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REFERENCES

- Amin, N.D. & Paşca, S.P. 2018, "Building Models of Brain Disorders with Three-Dimensional Organoids", *Neuron*, vol. 100, no. 2, pp. 389-405.
- 2. Asrizal. 2016, "Penanganan Anak Autis dalam Interaksi Sosial", Jurnal PKS, vol. 15, no. 1, pp. 1-8
- Faras, H., Al Ateeqi, N. & Tidmarsh, L. 2010, "Autism spectrum disorders", *Annals of Saudi Medicine*, vol. 30, no. 4, pp. 295-300.
- Hirvikoski, T., Mittendorfer-Rutz, E., Boman, M., Larsson, H., Lichtenstein, P. and Bölte, S. (2016) "Premature mortality in autism spectrum disorder," *British Journal of Psychiatry*. Cambridge University Press, 208(3), pp. 232–238
- Jensen, V.K. & Spannagel, S.C. 2011, "The Spectrum of Autism Spectrum Disorder: A Spectrum of Needs, Services, and Challenges", *Journal of Contemporary Psychotherapy*, vol. 41, no. 1, pp. 1-9.
- Lord, C., Elsabbagh, M., Baird, G. & Veenstra-Vanderweele, J. 2018, "Autism spectrum disorder", *The Lancet*, vol. 392, no. 10146, pp. 508-520.
- 7. Odom, S.L., Cox, A.W. & Brock, M.E. 2013, "Implementation Science, Professional Development, and Autism Spectrum Disorders", *Exceptional children*, vol. 79, no. 2, pp. 233-251.
- Rokhaidah, D.A. 2018, "Metode Glemm Doman Meningkatkan Kemampuan Interaksi Sosial Anak Autis", Jurnal Care, vol. 6, no. 1, pp. 15 – 25
- 9. Shifrin, A. 2019, Autism & creativity, Future Publishing Ltd., Bath.