Home interior wall treatment to support sensory games for toddlers in Indonesia during the pandemic situation

R. Rachmawati, I. Hanom & A. Sidarta

Telkom University, Bandung, Indonesia

ABSTRACT: The COVID-19 pandemic situation forced people to do activities from home, including parents of toddlers in Indonesia that faced new challenges of accompanying their children to play and learn at home. Toddlers learn from their surrounding environments through their five senses. Therefore, a game method that stimulates the senses is needed to be played at home, and one suitable medium for this is the wall surface. This study aims to determine what types of simple sensory games can be used as interior wall treatments for toddlers to play at home. The qualitative method is used in this research through the collection of literature and a questionnaire from respondents who are parents of toddlers. The results of this study are the division of wall treatments that can be a guide for parents, designers, or architects to process the walls as an exploration game medium to stimulate the senses of homebound toddlers.

Keywords: interior, wall treatment, sensory games, toddler

1 INTRODUCTION

The COVID-19 pandemic situation, especially in Indonesia, is still ongoing and there are no signs of abatement. Therefore, all activities such as work, study, play, and so on are carried out at home (Choerotunnisa 2018). Some parents are aware of the inconvenience of this, where in addition to having to work from home to meet their daily needs, they must also spend extra time to accompany their children to learn at home. This is certainly a double pressure for employees who are also mothers who have toddlers. Moreover, they have a new role to assist their toddlers who are still in school that now went under a distance learning policy (learning from home) (Vibriyanti 2020). For this reason, effective play media for toddlers are needed to help ease the activities of mothers at home. Basic games that are usually applied at home are still restricting the toddlers, therefore it is necessary to create play facilities for toddlers at home that can provide a comfortable atmosphere without making them feel confined (Oktaria and Putra 2020).

Toddlers will experience sensorimotor maturation that affects concentration, posture, balance, and daily behavior. Thus, treatment is needed as early as possible in the form of a brain gym which uses a lot of sensory skills. The sensory game does not have to always use sophisticated equipment; it can also be done with simple methods. The most important goal is to activate the child-friendly space that supports their activities at home (Kaiser 2020).

Sensory games, in the current pandemic situation, are safe to play at home and will greatly help children participate in activities that are beneficial for their development. There are games that can support the quality of toddler education with their five senses. Most sensory activities are part of the development of a child since birth (Galetti et al. 2020). This game is very useful to improve the brain development of children. However, this type of game often causes the room to become messy and troublesome for parents (Winahyu 2020). Therefore, an efficient form of play is needed that can stimulate the senses and support the quality of children when playing at home while not bothering parents when accompanying them. One part of the space that is considered efficient for

sensory game application is the wall element. The following will discuss the results further and discussion of this research.

2 RESEARCH METHODS

The research method used is a qualitative method, in which an analysis of the latest literature reviews the development of children's play activities during a pandemic situation. It is then associated with user experience in the field, obtained through a questionnaire. The first step is capturing the phenomenon experienced by toddler (0–5 years old) in Indonesia during this pandemic when they are playing games at their own home. After that, further analysis is carried out on the needs of the game that has been done so far, especially the sensory games. There were 50 respondents who are parents as well as workers, where they participate in a work from home (WFH) system as well as accompanying their toddler to play at home during this pandemic. The result from the questionnaire will be a foundation to design a sensory game as a room treatment during the pandemic situation.

3 RESULT AND DISCUSSION

3.1 Result

The questionnaire was given to 50 respondents with the following criteria: the occupation of parents, age of the children, and their experience of playing sensory games (Figure 1). Based on respondents' experience, as many as 92% of them had played sensory games at home.

Figure 1. Diagram of respondents' background.

Based on the data obtained, the average young working mothers during the COVID-19 pandemic from March–July (4 months) did their work from home while also caring for their children. As many as 68% of them have children in the age range of 0–3 years old, where these children are categorized as toddlers, and in that age range their role is dominated as sensorial explorer. Naturally, they will learn from their environment through what is felt by their five senses. For this reason, the first important educational stage for children at this age is sensory play (Sanders 2016). Of all working mothers' respondents, 92% were proven to have had sensory play activities with their children while at home during this pandemic situation (Figure 2). As many as 75% of working mothers choose the living room as the best area to do their office work, supervise their children, as well as play with their children (Figure 2).

As many as 50% of those who choose the living room said that the reason for this because this room is easily accessed from other rooms so it is easier to supervise the children. The other 46% mentioned the reason was because the living room is the widest area, and 4% of the rest said that this area is the most popular with children.

Of the various elements in the living room interior, the wall is the most effective and efficient element that can function as a sensory game wall treatment. As many as 97.8% of respondents

Figure 2. User experience in sensory activities at home during the pandemic.

Table 1. Interior element selection for sensory games.

No	Interior Element	Percentage
1.	Wall Treatment	49%
2.	Floor Treatment	17%
3.	Furniture	34%

Table 2. Sensory games for interior wall treatment.

No.	Type of Activity	Type of Game	Percentage
1	Identifying shape/ color (visual)	Introducing 3D shapes, getting to know colors, playing snakes and ladders	30%
2	Drawing (visual, action)	Coloring with paint/crayon	8%
3	Moving things (visual, action)	Moving water and ice cream stick, color sorting	26%
4	Training hearing sense (sound)	Distinguishing the sound of animals, playing piano, identifying notes	6%
5	Playing Lego (visual, action, touch)	Playing puzzle, mega block, Lego, blocks, scrabble, wooden pairs of numbers, and uno stacko	20%
6	Recognizing texture (touch, feel)	Playing using pattern box, sensory beads/ hydro-gel, rice, kidney beans, sponge, oobleck, and dough	44%

agreed that in addition to stimulating the five senses, the application of sensory boards to the wall can also help the child's growth stages from sitting, crawling, standing, to walking. This is also in accordance with the literature which states that the selection of interior elements of the wall as a medium for sensory game application is based on respondents' experience data where as many as 49% agree to choose wall treatment as the place for sensory game applications for toddlers (Table 1).

Based on Table 1, the wall area gets the most votes from respondents. This phenomenon is related to the study that the wall area is an alternative interior element that can be maximized so that it does not take up too many spaces and it can take advantage of the child's narrow room (Hindiarto et al. 2015). As for the toddler (0–3 years old) anthropometry data, it was taken based on median data on Indonesian children's height. Indonesian children aged 0–3 years old have a height of about 58–86 cm (Muljati et al. 2016). This data is used as a reference to determine the dimensions of length and height in the wall area where the sensory games for toddlers can be applied. For a sensory board attached to a wall, the maximum height dimension is 90 cm with a length that can vary. To be applicable in the design of sensory game wall treatments, there are various types of activities and games that were chosen by the respondents as explained in Table 2.

Figure 3. Sensory games as interior wall treatment at home.

The application of a wall treatment in the form of sensory games is dominated by the activity of recognizing texture (44%). Toddlers are quite happy to play this game. In fact, they play it repeatedly for a duration of 0–60 minutes. Another activity chosen is identifying shapes/colors (30%) as well as moving things according to its shape and color (26%). Thus, the following are the sensory game distribution chart that can be applied as an interior wall treatment at home during the pandemic (Figure 3).

The results of the interior wall treatment application in the form of sensory board games in the living room were tested again and received a good response from respondents. In the application, 83.3% of parents were satisfied and agree that if this sensory wall was applied in their home they would use it. The respondents who chose to agree (84.4%) and 75.6% of them also feel that toddlers are not easily bored of it, so they can play longer on the side of the wall. Another positive impact is there are 48.9% of parents that said they can supervise their children playing while doing other work, so that children can play and fully become sensory explorers while staying in a safe situation at home.

3.2 Discussion

Parents have had sensory play activities with their children while at home during this pandemic situation. Sensory play is the first safe choice of play by children to optimally maintain their growth development process. Sensory games are all activities that stimulate the senses, such as touch, smell, taste, movement, balance, vision, and hearing. Research (Sanders 2016) shows that sensory play builds nerve conditions in the brain pathways, which in turn lead to a child's ability to complete more complex learning tasks. This type of game can also help children to develop and improve memory. As a result, the favorite area for playing is the family room; this is consistent with the theory that reveals that living room areas in the middle part of a house are the interaction centers for children with other family members while also allowing for caregiver supervision from various directions (Olds 2002). Most parents agree that their children can get a lot of stimulation from various existing games with this sensory wall in the living room.

4 CONCLUSION

In this pandemic situation, children still need a physical environment that supports their growth and development process. Sensory games that are applied as a treatment of the living room wall are the answer to the busyness of parents and the boredom of children at home. This sensory wall keeps children active while still receiving parental supervision. Because of its application to the wall, the position of the game type applied can be adjusted, including the game of recognizing the texture, shape, and color, as well as drawing it, and moving objects or unloading pairs. The application of sensory games as interior wall treatments in the living room at home is proven to reduce the child's boredom at home and make it easier for parents to watch the children play.

REFERENCES

- Choerotunnisa, V. 2018. *Di Tengah Pandemi Covid-19, Kreativitas Pendidik Tetap Dukung Pembelajaran*. Retrieved 2020, from www.siedoo.com: <https://siedoo.com/berita-30188-di-tengah-pandemi-covid-19-kreativitas-pendidik-tetap-dukung-pembelajaran/>
- Galeti, F.S., Arvigo, M.C., Berardineli, F.P., Felippette, T.R.B., and Bordini, D. 2020. *How to Help Children and Adolescents with Autism Spectrum Disorder during Covid-19 Pandemic*. Journal of Psychology and Neuroscience. Brazil.
- Hindiarto, F., Setiawan, A.P., and Kattu, G.S. 2015. *Kajian Terapan Elemen Interior Ruang Pre-School pada Angels n I Children Day Care di Surabaya*. Jurnal Intra 3(2).
- Kaiser, C. 2020. *Recommendations for health protection of people with disabilities during outbreaks: Lessons learned from the 2019 Novel Coronavirus*. ONG Inclusiva.
- Muljati, S., Triwinarto, A., Utami, N., and Hermina, H. 2016. *Gambaran Median Tinggi Badan Dan Berat Badan Menurut Kelompok Umur Pada Penduduk Indonesia Yang Sehat Berdasarkan Hasil Riskesdas 2013*. Kementerian Kesehatan RI. Jakarta, Indonesia.
- Oktaria, R. and Putra, P. 2020. *Child Education in The Family as An Early Childhood Education Strategy During the Covid-19 Pandemic*. Jurnal Ilmiah Pesona PAUD. 7(1).
- Olds, Anita, R. 2002. *Child Care Design Guide*. New York: McGraw Hill
- Sanders, S. 2016. *Montessori Sensorial Activities: New Montessori Sensorial Activities to Cultivate Learning in the Classroom and the Home*. Iditarod Press.
- Vibriyanti, D. 2020. *Work from Home: Cara Bekerja Baru di Masa Pandemi Covid-19*. Pusat Penelitian Kependudukan-LIPI, Jakarta.
- Winahyu, A.I. 2020, Maret. *Setumpuk Drama Siswa Saat Belajar Di Rumah*. Retrieved from www.mediaindonesia.com: <https://mediaindonesia.com/read/detail/298117-setumpuk-drama-siswa-saat-belajar-di-rumah>.