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Increasing School-Age Children's Understanding of The Impact of GadgetsThrough Snake-Ladder Games

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Abstract

Background: Gadgets are one of common technological developments that are used by all groups, including children. School-age children (6-12 years) use gadgets due to parents who are busy working and gadget prices are getting cheaper due to competition in the market.
Objective: Reducing the negative impact of gadgets on children, especially school students.
Method: One of the things that can be done is through educational game tools, namely playing snake-ladder games about the negative effectsof gadgets.
Result: The results obtained are that children's knowledge about the negative effectsof gadgets increases and it is expected to reduce the use of gadgets for school children.
Conclusion: This activity was that the results of children's knowledge about the negative effects of gadgets increased. Furthermore, it can be applied in other Health Center Services assisted areas by involving other audio-visual media.

Keywords: school-age, effect of gadget, educational game

Introduction

Gadgets are one of common technological developments that are used by all groups, including children. School-age children (6-12 years) use gadgets due to parents who are busy working and gadget prices are getting cheaper due to competition in the market. The applications contained in these gadgets are not only applications for learning to recognize letters or pictures as well as knowledge information, but there areentertainment applications, such as social media, videos, pictures and even video games. Children will more often use their gadgets to play games than to study or play outside the home with friends their age.[1]

Research said that as a result of electronic media, children have little space to play outside the home. Based on several studies, children aged 0-2 years should not be

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exposed to gadgets, children aged 3-5 years are limited to only 1 hour per day, and 2 hours per day for children aged 6-18 years. But the facts on the ground show that many children use gadgets 4-5 times more than the recommended amount.[2]

Data from KOMINFO in 2014, the level of gadget use in Indonesia is very high. Based on the survey, it was found that 98 percent of children and adolescents in Indonesia know the internet and 79.5 percent of them are internet and gadget users. The use of gadgets in children is highly discouraged because it can interfere with their growth and development process.

The other results show that since using gadgets, when children are at home it becomes difficult to communicate, they don't care and they don't respond when their parents talk to them.[3] In addition, gadgets also have an impact on children's motor development. Research conducted by Fanny et al states that one of the factors that influence the motor development of elementary school students is the length of time children are familiar with gadgets and the length of time they use gadgets every day.[4] Children who spend time with gadgets without paying attention to the brightness of the gadget screen, the effects of gadget radiation, and the distance of the screen from the child's eyes can also affect the health of the child's eyes. In addition, children who look at electronic screens continuously for a longtime cause eye irritation, stress on visual function, decreased visual acuity and myopia.[5] Stress on the accommodation muscles can occur when a person tries to look at small objects and at close distances for a long time.

Under these conditions, the eye muscles will work continuously and be more forced. The tension of the accommodating muscles (ciliary muscles) is greater resulting in an increase in lactic acid and as a result eye fatigue occurs, stress on the retina can occur if there is excessive contrast in the visual field and the observation time is long enough.[6] The other results of research also state that there is an influence between position and lighting intensity using gadgets on decreased visual acuity in children.[7] The more decreased visual acuity in children, the higher the risk of complications of blindness, such as glaucoma and retinal abrasion.[8]

Nurses, one of their roles as educators, can play a role in reducing the negative impact of gadgets on children, especially school students. Therefore, there is a need for community service activities through educational and creative games such as snake-ladder for preschool children about the impact of gadgets on children so that they can reduce the impact of gadgets on children.

Method

Activities are carried out using educational game tools which are game tools that can optimize children's development, according to their age and level of development through snake-ladder games which contain material on the impact of gadgets on children. After the pre-test, information was provided regarding the impact of gadgets using snake-ladder as media. The team explained the snake-ladder game media first and the team also explained the rules of the game. The rules of the game are almost the same as the snake-ladder game in general. Participants roll the dice and step towards the box according to the number of dice. If they are in a box with a ladder, the participant has the right to go up to the intended box. And if the participant is in a box with a picture of a snake's head, then the participant must go down following the snake's tail. The difference is, in this snake-ladder game media, almost every box has its own instructions. There were two participants who became players in this activity. The participant rolls the dice and steps towards the box according to the number on the dice. Participants read the instructions aloud in the box. The team explained the purpose of the instructions on the box. When explaining the instructions, there was also a question-answer interaction between the team and the participants. The two participants race against each other to finish the game. Sometimes participants also have to climb down the snake and climb the ladder.

Results

This community service activity was carried out in the Jatiwarna Community Health Center's target area. Community service is carried out in the form of implementing snakes-ladders educational games about the negative effects of gadgets.

The results of the activity were 9 children participating in this activity. The initial plan was to schedule a lot of children to attend, but because it was still in the atmosphere of the Covid19 pandemic, only 9 could attend. Activities are carried out in stages, in order to maintain health protocols, namely, screening for temperature at the start, washing hands, wearing masks, and keeping a safe distance.

The results of the pre-test showed that the score of 7 children had a sufficient level of knowledge about the negative effects of gadgets (78%), the remaining 2 children had a good level of knowledge about the negative effects of gadgets (22%). The results of the post test showed that 6 children had a good level of knowledge about the negative effects of gadgets (67%), the remaining 3 children had an adequate level of knowledge about the negative effects of gadgets (33%). While playing snake-ladder the

children looked enthusiastic and happy.

The media for the game of snake-ladder due to the impact of gadgets can be seen in Figure 1 below:

Figure 1. Snake-ladder Games Tool

Discussion

Children's knowledge about the impact of gadgets increases and it is expected to reduce the use of gadgets for school children. Presenting the discussion in the order of the formulation of the questions. The discussion is an activity to compare with previous community service articles. The discussion must interpret the findings expressed in the results obtained with the background of existing knowledge (not repeat the result). The discussion must highlight what's new. State the advantages and disadvantages of community empowerment activities that are carried out with the conditions of the surrounding community.

Conclusion

The conclusion in this activity was that the results of children's knowledge about the negative effects of gadgets increased. Furthermore, it can be applied in other Health Center Services assisted areas by involving other audio-visual media.

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Conflict of Interest

There is no conflict of interest.

References

1. Nurrachmawati, 2014. Pengaruh sistem operasi mobile android pada anak usia dini. jurnal pengaruh system operasi mobile android pada anak usia dini. *Jurnal Pengaruh Sistem Operasi Mobile Android Pada Anak Usia Dini.* Universitas Hasanuddin. Makasar.
2. Suhana, M. 2017. Influence of Gadget Usage on Children's Social-Emotional Development. International Journal of Early Childhood Education, vol. 169: 224-227.
3. Dewi, S.R. (2013). Buku Ajar Keperawatan Gerontik. Nuha Medika, Yogyakarta.
4. Sundus, M. (2017). The Impact of using Gadgets on Children. Journal Depress Anxiety 7(1), 296. doi: 10.4172/2167-1044.1000296
5. Ilyas, S. (2004). Ilmu Perawatan Mata. Jakarta: Sagung Seto.
6. Tiharyo, I., Gunawan, W., & Suhardjo. (2008). Pertambahan Miopia pada Anak Sekolah Dasar Daerah Perkotaan dan Pedesaan di Daerah Istimewa Yogyakarta. Jurnal Oftalmologi Indonesia, 6(2), 104-112.
7. Fanny, A. O., Tutut, J. P., Giyanti, l. P., Alfisyahrina, H. &Aandriana, y. (2014). Faktor Pengaruh Gadget Terhadap Kecerdasan Motorik Siswa SD Melalui Regresi Logistik Ordinal. Institut Teknologi Sepuluh Nopember Surabaya.