



Behavioral Portrayal of Gadgets in School-age Children in Integrated Islamic Elementary School

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ABSTRACT

Background: Today technology is very rapidly growing. Gadgets as devices often used in modern times can make human activities easier. Where today, the proliferation of schoolchildren using gadgets where children allow persistent use of gadgets regardless of the possible health effects. **Purpose:** elaborated on the behavior of gadgets use in school-age children in Integrated Islamic Elementary School (SDIT) Az Zahra 1 Sragen. **Method:** quantitative descriptive, 59 respondents by simple random sampling technique. The instruments used are questionnaires and data analytics using univariate analysis. **Results:** as many as 39 respondents (66.1%) use gadgets >2 hours/day, lying position 35 respondents (59.3%), on a dim screen 44 respondents (76.6%) and in the light room by 45 cm (76.3%), at a distance of <30 cm (52.5%) and the behavior of gadgets use in children are less <50% (64.4%). **Conclusion:** the behavior of the use of gadgets in children is more than 2 hours a day, by using lying position, by the use of gadgets on the dim screen and the bright room, and the use of gadgets at a distance of less than 30 cm.

Keywords: behavior, gadgets, school-age children

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I. BACKGROUND

Today technology is very rapidly growing. One of the ever-expanding technological sectors is a gadget or smartphone. Gadgets as devices often used in modern times can make human activities easier. Gadgets are also used as communication tools and as entertainment media. Nowadays, gadgets can be used by

any age group, be they adults, youth to school children (Pertiwi et al., 2018).

By 2022, the number of gadget users was predicted at 3.9 billion. This growth will be affected by region-region that is developing, including the Middle East, Africa, Latin America, and Southeast Asia (Aswar & Erviana, 2020). A research institute study lists Indonesia as the fifth the world's largest gadget users with 47

million active users or about 14% of all cellphone users (Abdu et al., 2021).

According to a survey by the Indonesian child protection commission (KPAI) 2020, there are about 71.3% of school-age children have gadgets and or playing their gadgets for a considerable amount of time a day, and a total of 55% spend their time playing the cell phone on both online and offline games (Adinda et al., 2021). According to the national socioeconomic survey (SUSENAS) the percentage of people aged 5 years and up with Internet access in Sragen district is 52.07% by 2020, which indicates that Sragen district has a high number of gadget users (BPS Provinsi Jawa Tengah, 2020).

The impact a gadget can have is positive, it is easy for children to look for information about learning, and it is easier to communicate with friends. However, the negative effects that come from gadgets, do affect the development of child psychology, especially in terms of emotional growth and moral development. In emotional growth, children who use gadgets become irritable, and defiant, imitate behavior in gadgets and speak to gadgets themselves. While his influence on moral development, impacts discipline, children are lax in doing things, abandoning their obligations to worship, and their learning time reduced as a result

of overplaying and watching youtube (Syifa et al., 2019).

At this time too many elementary school children are using gadgets, this is the basis for researchers to take this study with a view to the behavior of gadgets use in school-age children. Where the results of this research are expected to provide information for both schools and parents to exercise control and supervision of children using gadgets.

2. METHODS

The study is a quantitative descriptive study. The study studied the behavior of school-age children's gadgets. The population in this study is elementary school students in Integrated Islamic Elementary School (SDIT) Az Zahra 1 Sragen. The respondents in this study are 5th-graders, with the inflexible criteria of students who have more or less gadgets for 6 months, students who are active with more or less gadgets for 6 months, class 5 students, and those who are willing to respond. The exclusion criteria are students who have graduated, students outside the school ward, and graders 1,2,3,4, and 6.

The variable in this study is the behavior of gadgets that includes the duration of gadget use, the position of gadgets used, the intensity of illumination

as well as the visibility of gadget use. Then the instrument used to know the behavior of gadget use is by using a questionnaire

with a data analysis technique performed by a univariate analysis.

3. RESULTS

Table 1. distribution of the frequency of gadget use behavior (n=59)

Gadget use behavior	Frequency	Percentage (%)
Duration		
≥2 hours/day	39	66,1
<2 hours/day	20	33,9
Position		
Lye position	35	59,3
Sitting position	24	40,7
Intensity of screen lighting		
Dim screen	44	74,6
Bright screen	15	25,4
Lightroom Intensity		
There's no light	14	23,7
Light room	45	76,3
Distance of View		
30 Cm	28	47,5
<30 Cm	31	52,5
Gadget use behavior		
Fine >50%	21	35,6
Less <50%	38	64,4

Based on Table 1 shows the duration of the majority of gadget used over 2 hours/day by 39 respondents with 66.1% percentage, and the time of gadgets used is less than 2 hours/day by 20 respondents with 33.9% percentage. Then, the position of gadget use is 35 respondents lying position by 59.3% percentage, with a sitting position of 24 respondents by 40.7% percentage, and the intensity of screen lighting the majority uses a dim screen as much as 44 respondents with 74.6% percentage, and with a bright screen as

many as 15 respondents with 25.4% percentage.

The intensity of light in the majority's room with a light of 45 respondents with 76.3% percentage, and with a light less than 15 respondents with 23.7% percentage. Then, the eye viewpoint with the most gadgets was less than 30 cm by 31 respondents with a percentage of 52.5%, and with a distance of more than 30 cm by 28 respondents with a percentage of 47.5%, and the behavior of gadget use in children is fine >50% of 21 respondents with 35.6% percentage and fewer behaviors by 64.4%.

4. DISCUSSION

Excessive and inappropriate use of gadgets will make a child indifferent to the environment, both in the family and in the community. A person's indifference to his or her surroundings may result in a distance from his or her theme even being remotely aligned in the neighborhood. The negative effects of the use of gadgets, the negative effects that arise is that it is easy for a person to obtain a wide range of information from different media and technology which makes a child lazy to move about and engage in a wide range of activities. This statement certainly hurts on both the health and development of children (Fadlilah & Krisnanto, 2019).

This study corresponds to a study by Permana (2020) where children are mostly using gadgets >2 hours a day, the number of 77 people (77%). Previous research is done by Solikah & Trisnowati (2022) where most of the respondents are using gadgets for the duration of the 2 hours/day usage of 28 children (70%). The study is by the research done by Kusumawati (2020), where the prevalence for a long duration of gadgets used in obese children is 32.0% (n=24), with the average duration of daily gadget use of 3 hours and 48 minutes.

Then the study also corresponds to the study done by Kumala (2019) where the number of gadgets was high in places

where 44 respondents used gadgets over 120 minutes a day. But the results are not consistent with those done by Putriana (2019) where the number of children using gadgets at the most duration is 40 to 60 minutes 15 respondents (44.1%).

Excessive use of gadgets in the wrong places will have a major impact on eye health. The position of engaging in the activity with gadgets in a sitting position is valued better than the lying position. This is because it is possible to maintain an ideal distance between the eye and the object being seen. Whereas using gadgets with a posture on your back can cause the eyes to become inactive. This is because the muscles in the eye will pull the eyeball downward along where the object is seen, causing the eye to become more strongly accommodated. A lingering eye will be exposed more quickly both to a drop in sight and to some weariness of the eye (Zaldi, 2022).

The study corresponds to Susanti (2021) who used gadget in a reduced position and made up the largest group of 77.1%. Whereas the respondents with used gadget by sitting positions, would be the smallest of the group, with a total of 22.9%. The study is also linked to a work done by Zeffira (2023) from which of the 141 students at the baiturrahmah pandang force 2020, the number of smartphones is

inadequate to 96 (68.1%). The study is also consistent with that done by Putri (2023) where most of the respondents used smartphones in improper positions as many as 95 students. But this research is not consistent with the work done by Wulandari (2019) where most of the respondents sit in a sitting position of 27 (71.2%).

Good illumination is enough and sufficient light to prevent eye tension. The effect of inadequate illumination will affect eye work with the symptoms of irritation of the eye, sightseeing double, eye pain, reduced ability of accommodation and lowered vision. Accommodations were reduced by low light intensity the point of moving away would mean that the speed and precision of the accommodations could be reduced. So when the intensity of light is lower, the speed and precision of accommodations are reduced (Mardiana et al., 2019).

This study corresponds to research from Pertiwi (2018) where respondents this study claim to use the beginning when there are 34 lights (50%), and 24 people (35.3%) say that sometimes it is beginning when there is no light. The study is also consistent with research by Sianturi (2021) in which most of the respondents have unstandardized lighting intensity with several 65 respondents (79.3%), whereas

according to standard lighting intensity is 17 (207%). However, the research is not consistent with the work done by Siswoyo (2022) of 64.3% lighting the screen screen and 35.7% using the off-screen screen. The study is also consistent with research done by (Karimah, 2022) where 72.5% of respondents use dimmed gadget lighting.

Visibility in gadgets use is influenced by some of the ways that viewing activities in close range like reading and playing online games. Then also because of the student's habit of using gadgets with a lay position, where the lying position makes the hand easily tired and causes visibility to become more unconscious. Poor behavior factors such as overexposure to gadgets that are too close to your eyes may be a major factor in eye health (Hidayani et al., 2020).

This research corresponds to research done by Muallima (2019) where the most advanced range of gadget use 71 disciples (63.4%), while the distance is only 41 disciples (36.6%). The study is also consistent with Nasyahadila (2022) where 20 cm of gadget use 93 people (36%) which means that the respondents are more likely to use gadgets at close range than those under 30 cm. The study is also by the study done by Chairiah (2022) where the visibility of using gadgets is dominated by a poor category of 115

(70.1%). The study is also consistent with research conducted by this Anggraini (2022) where as many as 17 students (57%) use gadgets at visibility. But the results of this study are not consistent with those done by Sinurat (2022) where the range of gadget use in the respondents is 93.

The behavior of such gadget is use if one is subjected to constant and unsupervised parenting, it becomes a habit with children and has a social impact on them, especially on social life. Children who overuse gadgets if left for too long would not rule out the possibility that a new social attitude is indifferent to the social environment, whether interacting between their peers, parents or the neighborhood (Rini et al., 2021).

The behavior of such gadgets is also influenced by the parents, which parents give gadgets because they are busy working and which the price of gadgets is affordable on the market. Parents give children gadgets with a good purpose to help the online learning process and also to prevent their children from being technologically illiterate. Many features of applications are available on gadgets, not only those about learning to know letters or pictures, but there are also entertainment applications such as social media, videos, pictures, and even online games. But this constant use of gadgets has affected a pattern of childhood

behavior in his day. Children depend heavily on gadgets which often become routine activities that children have to perform. Many have found that children play with gadgets more often than learn to interact with their surroundings (Saniyyah et al., 2021).

This study corresponds to research conducted by Keswara (2019) where most of the respondents have inappropriate gadget use behavior, which is 68 people (57.1%). The study is also consistent with what Andira (2022) has done by showing the number of other gadget use behaviors of 54 people using gadgets to excess. In another study carried out by Putri & Chairunissa (2020) the results of gadget uses behavior on moderate respondents, that is 88 people (55.0%). The study is also consistent with another study research conducted by Anggraeni (2019) where it shows that more male respondents are at risk (60.7%) than non-risky behaviors (39.3%) in gadget use. The study is also consistent with another study, which is done by Abdu (2021) where the dominant use of gadgets falls under the category of 52 (86.7%).

5. CONCLUSION

Based on the results of the study, that is the result of the research obtained by respondents using gadgets under time >2

hours/day. 35 respondents with gadgets lying position. The respondents the use gadgets in the dim screen by 44 respondents and the use of gadgets in a bright room by 45 respondents. The respondents with gadgets use at <30 cm by 31 respondents. Studies show behavioral use of gadgets in children is less <50% of 38 respondents. It may be concluded that the portrayals of the behavior of the use of gadgets in children tend to be more than 2 hours a day, by being in a lying position, by using gadgets on a dim screen and a bright room, and by using gadgets at a distance of less than 30 cm.

AUTHOR CONTRIBUTIONS

Substantial contributions to conception, writing and data analysis: Gilang Ayu Dwi Nanda and Irma Mustika Sari. Data collection: Gilang Ayu Dwi Nanda. Manuscript revisions: Gilang Ayu Dwi Nanda.

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CONFLICT OF INTEREST

This research originates from the research roadmap of the community

nursing cluster at the STIKES Majapahit Mojokerto with the Community Health Nursing.

CONFLICT OF INTEREST

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

REFERENCES

- Abdu, S., Saranga', J. L., Sulu, V., & Wahyuni, R. (2021). Dampak Penggunaan Gadget Terhadap Penurunan Ketajaman Penglihatan. *Jurnal Keperawatan Florence Nightingale*, 4(1), 24–30. <https://doi.org/10.52774/Jkfn.V4i1.59>
- Adinda, R., Isni, F., & Anugrah, D. (2021). Penanganan Kecanduan Gadget Pada Anak Usia Sekolah Selama Masa Pandemi Covid-19 Di Desa Wantilan, . Proceedings, Vol: I No:(November), 1–17.

- <https://proceedings.uinsgd.ac.id/index.php/proceedings/article/view/538/478>
- Andira, A. D., Usman, A. M., & Wowor, T. J. F. (2022). Hubungan Penggunaan Gadget Terhadap Kualitas Tidur Pada Mahasiswa Keperawatan Di Universitas Nasional. *Jurnal Promotif Preventif*, 4(2), 51–56.
- Anggraeni, S. (2019). Pengaruh Pengetahuan Tentang Dampak Gadget Pada Kesehatan Terhadap Perilaku Penggunaan Gadget Pada Siswa Sdn Kebun Bunga 6 Banjarmasin. *Faletehan Health Journal*, 6(2), 64–68.
- Anggraini, W. A., Triyoolanda, A., Fadhillah, E. R., & Amri, S. (2022). Edukasi Tentang Pengaruh Bermain Game Online Terhadap Kesehatan Mata Pada Siswa/I Smp Muhammadiyah 61 Tanjung Selamat. *Pubhealth Jurnal Kesehatan Masyarakat*, 1(1), 47–51.
- Aswar, A., & Erviana, E. (2020). Hubungan Smartphone Dengan Kualitas Tidur Remaja Di Sma Negeri 2 Majene. *Journal Of Islamic Nursing*, 5(2), 95–100.
- Bps Provinsi Jawa Tengah. (2020). Persentase Penduduk Berumur 5 Tahun Ke Atas Yang Mengakses Internet Dalam 3 Bulan Terakhir Menurut Jenis Kelamin Di Kabupaten Malang, 2017-2019. Badan Pusat Statistik Provinsi Jawa Tengah. <https://jateng.bps.go.id/>
- Chairiah, C., Basri, S., & Sakdiah, S. (2022). Hubungan Penggunaan Gadget Dengan Gejala Sindrom Mata Kering Pada Mahasiswa Psikologi Universitas Syiah Kuala. *Jurnal Kedokteran Nanggroe Medika*, 5(4), 22–30.
- Fadlilah, S., & Krisnanto, P. D. (2019). Analisis Penggunaan Gadget Dan Interaksi Sosial Anak Usia Pra Sekolah Di Taman Kanak-Kanak Yogyakarta. *Jurnal Keperawatan Muhammadiyah*, 4(2).
- Hidayani, N. P., Tat, F., & Djogo, H. M. A. (2020). Hubungan Antara Lama Penggunaan , Jarak Pandang Dan Posisi Tubuh Saat Menggunakan Gadget Dengan Ketajaman Penglihatan. *Chm-K Applied Scientifics Journal*, 3(1), 28.
- Karimah, R. N. (2022). Hubungan Asupan Vitamin A Dan Kebiasaan

- Penggunaan Gadget Pada Mahasiswa Penderita Mata Minus (Miopia) Jurusan Gizi Poltekkes Kemenkes Surabaya. Poltekkes Kemenkes Surabaya.
- Keswara, U. R., Syuhada, N., & Wahyudi, W. T. (2019). Perilaku Penggunaan Gadget Dengan Kualitas Tidur Pada Remaja. *Holistik Jurnal Kesehatan*, 13(3), 233–239.
- Kumala, A. M., Margawati, A., & Rahadiyanti, A. (2019). Hubungan Antara Durasi Penggunaan Alat Elektronik (Gadget), Aktivitas Fisik Dan Pola Makan Dengan Status Gizi Pada Remaja Usia 13-15 Tahun. *Journal Of Nutrition College*, 8(2), 73–80.
- Kusumawati, E., Fathurrahman, T., & Tizar, E. S. (2020). Hubungan Antara Kebiasaan Makan Fast Food, Durasi Penggunaan Gadget Dan Riwayat Keluarga Dengan Obesitas Pada Anak Usia Sekolah (Studi Di Sdn 84 Kendari). *Tunas Medika Jurnal Kedokteran & Kesehatan*, 6(2).
- Mardiana, S. S., Hartinah, D., Faridah, U., & Prabowo, N. (2019). Hubungan Antara Bermain Gadget Dengan Ketajaman Nilai Visus Mata Pada Anak Usia Sekolah Tpq Mamba'ul Ulum Wedarijaksa Pati Tahun 2018. *Prosiding University Research Colloquium*, 228–237.
- Muallima. (2019). Hubungan Penggunaan Gadget Dengan Penurunan Tajam Penglihatan Pada Siswa Smp Unismuh Makassar. *Jurnal Ilmiah Kesehatan*, 7, 79–85.
- Nasyahadila, V., Djunaedi, E., Suparni, S., & Laras, D. S. (2022). Jarak, Durasi, Dan Keluhan Kelelahan Mata Dalam Penggunaan Gadget Civitas Akademika Stikes Dharma Husada Bandung Tahun 2020. *Jurnal Sehat Masada*, 16(1), 58–68.
- Permana, G. A. R., Sari, K. A. K., & Aryani, P. (2020). Hubungan Perilaku Penggunaan Gadget Terhadap Miopia Pada Anak Sekolah Dasar Kelas 6 Di Kota Denpasar. *Intisari Sains Medis*, 11(2), 763–768.
- Pertiwi, Sanubari Tpe, & Putra Kp. (2018). Gambaran Perilaku Penggunaan Gawai Dan Kesehatan Mata Pada Anak Usia 10-12 Tahun. *Jurnal Keperawatan Muhammadiyah*, 3(1), 28–34.
- Putri, D. U. P., & Chairunissa, N. (2020). Perilaku Penggunaan Gadget Di Era

- New Normal Dengan Kualitas Tidur Pada Remaja Di Smpn 2 Abung Selatan Kabupaten Lampung Utara. *Prosiding Seminar Nasional Penelitian Dan Pengabdian Kepada Masyarakat*, 1(1), 81–86.
- Putri, M. M., Alini, A., & Apriyanti, F. (2023). Hubungan Jarak, Durasi Dan Posisi Penggunaan Smartphone Dengan Kejadian Astenopia Pada Mahasiswa S1 Keperawatan Semester Viii Universitas Pahlawan Tuanku Tambusai. *Jurnal Ners*, 7(1), 511–517.
- Putriana, K., Pratiwi, E. A., & Wasliah, I. (2019). Hubungan Durasi Dan Intensitas Penggunaan Gadget Dengan Perkembangan Personal Sosial Anak Usia Prasekolah (3-5 Tahun) Di Tk Cendikia Desa Lingsar Tahun 2019. *Jurnal Kesehatan Qamarul Huda*, 7(2), 5–13.
- Rini, N. M., Pratiwi, I. A., & Ahsin, M. N. (2021). Dampak Penggunaan Gadget Terhadap Perilaku Sosial Anak Usia Sekolah Dasar. *Jurnal Educatio Fkip Unma*, 7(3), 1236–1241.
- Saniyyah, L., Setiawan, D., & Ismaya, E. A. (2021). Dampak Penggunaan Gadget Terhadap Perilaku Sosial Anak Di Desa Jekulo Kudus. *Edukatif: Jurnal Ilmu Pendidikan*, 3(4), 2132–2140.
- Sianturi, D. C., Utomo, W., & Wahyuni, S. (2021). Hubungan Intensitas Pencahayaan Ruangan Dan Lama Penggunaan Gadget Dengan Kelelahan Mata (Asthenopia) Pada Mahasiswa Yang Melakukan Pendidikan Jarak Jauh. *Jurnal Online Mahasiswa (Jom) Bidang Ilmu Keperawatan*, 8(2), 63–71.
- Sinurat, B., Siahaan, P. B. C., Manalu, P., Hartono, H., & Sinaga, G. (2022). Gadget Use And Eye Fatigue On Students During Covid-19 Pandemic. *Jurnal Kesehatan Komunitas*, 8(2), 285–292.
- Siswoyo, S., Zulfatul A'la, M., Novema, L., & Kushariyadi, K. (2022). Hubungan Unsafe Action Penggunaan Gadget Dengan Nilai Visus Pada Remaja Miopia Di Rumah Sakit Daerah Balung Kabupaten Jember. *Bima Nursing Journal*, 3(2), 124. <https://doi.org/10.32807/Bnj.V3i2.874>
- Solikhah, S. N., & Trisnowati, T. (2022). Hubungan Durasi Penggunaan Gadget Dengan Ketajaman Mata Pada Anak Usia 10-12 Tahun Dimasa

- Pandemi Covid-19. *Jurnal Penelitian Perawat Profesional*, 4(3), 835–844.
- Susanti, M. (2021). Hubungan Durasi Penggunaan Gawai Dengan Visus Pada Mahasiswa Fk Uisu Tahun 2020. *Ibnu Sina: Jurnal Kedokteran Dan Kesehatan-Fakultas Kedokteran Universitas Islam Sumatera Utara*, 20(2), 91–102.
- Syifa, L., Setianingsih, E. S., & Sulianto, J. (2019). Dampak Penggunaan Gadget Terhadap Perkembangan Psikologi Pada Anak Sekolah Dasar. *Jurnal Ilmiah Sekolah Dasar*, 3(4), 527–533.
- Wulandari, K. D., Puspita, S., Rustanti, E., & Aryani, H. P. (2019). Hubungan Penggunaan Smartphone Dengan Ketajaman Penglihatan Pada Peserta Didik Di Smp Muhammadiyah 4 Kedungbetik Kesamben. *Media Pendidikan Keperawatan*, 1(3), 29–43.
- Zaldi, Y. (2022). Hubungan Durasi, Jarak & Posisi Penggunaan Smartphone Terhadap Kelelahan Mata Pada Mahasiswa Angkatan 2018 Fakultas Kedokteran Universitas Muhammadiyah Sumatera Utara. *Jurnal Ilmiah Maksitek*, 7(4), 11–15.
- Zeffira, L., Fitriyasti, B., & Athifah, M. (2023). Hubungan Penggunaan Smartphone Dengan Keluhan Nyeri Leher Pada Mahasiswa Fakultas Kedokteran Universitas Baiturrahmah Padang. *Jurnal Cahaya Mandalika*, 4(1), 617–629.