



## **IMPLEMENTATION OF A FAMILY-BASED SCREEN TIME REDUCTION PROGRAM IN FAMILY NURSING CARE FOR ADOLESCENTS WITH GADGET ADDICTION**

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### **ABSTRACT**

Adolescent gadget addiction is an increasing concern alongside the rapid advancement of digital technology. Excessive gadget use may negatively affect physical health, psychological well-being, social interactions, and academic performance. The Family-Based Screen Time Reduction Program is a family nursing intervention that may help address this problem. To describe the implementation of the Family-Based Screen Time Reduction Program in reducing gadget addiction among adolescents through family nursing care. This Final Nursing Scientific Project used a case study design involving three families with adolescents experiencing gadget addiction, selected through purposive sampling. Data were collected through interviews, observations, instrument completion, and documentation using a family nursing assessment form, observation sheets, the Family Gadget Control Card (KKGK), and the Smartphone Addiction Scale–Short Version (SAS-SV). The intervention was conducted over three consecutive days and included education on the impacts of gadget use, development of family media rules, monitoring of gadget use duration, enhancement of parent–adolescent communication, and alternative non-gadget activities. The SAS-SV was administered before and after the intervention, while gadget use duration and compliance with family rules were recorded daily. The intervention improved family knowledge and ability to supervise gadget use, reduced adolescents' screen time, enhanced parent–adolescent communication, and increased participation in family activities without gadgets. The Family-Based Screen Time Reduction Program may be an effective family nursing intervention for reducing gadget addiction among adolescents by strengthening the family's role in supervising and regulating gadget use.

**Keywords:** adolescents; case study; family-based screen time reduction program; family nursing care; gadget addiction

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## **INTRODUCTION**

The development of Science and Technology particularly in the field of communication, has progressed rapidly and brought significant changes to everyday life. These changes can be seen in the evolution of communication devices, from letters and landline telephones to various digital devices such as smartphones, laptops, tablets, and iPads. Technological advances provide various conveniences in carrying out daily activities and have made gadgets one of the devices widely used by society (Yumarni, 2022). Gadgets offer various functions and features that continue to develop according to users' needs. These conveniences have contributed to increasingly frequent gadget use among adolescents and may increase the risk of dependence on such devices (Firdaus & Marsud, 2021).

The increasing use of digital technology is also reflected in the growing number of internet users. According to Komdigi (2025), the global number of internet users reached approximately 5.56 billion people in 2025, out of a total world population of 8.2 billion. In Indonesia, the number of internet users has reached 221 million people, or approximately 79.5% of the total population. High internet usage is not limited to adults but has also increasingly reached children. Data from the Central Statistics Agency (BPS) in 2024 indicated that 39.71% of young children in Indonesia had

used mobile phones and 35.57% had accessed the internet. Among children aged 5–6 years, mobile phone use reached 58.25%, while internet access reached 51.19%.

The increasingly widespread use of digital technology from an early age may also increase the risk of problems associated with uncontrolled gadget use. UNICEF reported that every half second, a child somewhere in the world accesses the internet for the first time, while approximately 9.17% of internet users in Indonesia are under 12 years of age. This condition indicates that younger generations are becoming increasingly exposed to digital technology while also becoming more vulnerable to various risks in the digital environment. One issue requiring particular attention is gadget addiction, which refers to a condition in which individuals experience dependence and difficulty controlling the frequency or duration of digital device use. Gadget addiction may affect mental health, social interactions, and academic performance among adolescents (Nur Rizki & Suryati, 2022).

Gadget addiction among adolescents may be influenced by various factors originating from both individual and environmental conditions. These factors include the need to reduce stress, academic pressure, family conflict, inadequate parental supervision, and peer influence. The development of social media and online games with various attractive features may also encourage adolescents to spend more time using gadgets. In addition, the desire to remain socially connected and receive recognition through social media may further increase the risk of gadget dependence (Sri Nurhayati et al., 2025). Low self-control is also one of the factors associated with higher levels of gadget addiction among adolescents (Fauzi, Yusuf, & Mundakir, 2020).

Excessive gadget use may negatively affect various aspects of adolescents' lives. Adolescents experiencing gadget addiction are at risk of sleep disturbances, fatigue, visual problems, anxiety, stress, mood changes, and other mental health problems. Prolonged gadget use may also reduce learning concentration, limit direct social interactions, and negatively affect academic performance. Research by Mumbaasithoh, Ulya, and Rahmat (2021) demonstrated an association between low self-control and higher levels of gadget addiction among adolescents. This condition highlights the need for interventions that involve both adolescents and their families as the closest social environment in managing gadget use.

Considering these potential impacts, family-based interventions are needed to help reduce excessive gadget use. The Indonesian government has also implemented various efforts to protect children in the digital environment through regulations concerning child protection and the development of a safer digital space (Indonesia Digital, 2025). One program that can be implemented is the Family-Based Screen Time Reduction Program, a family-centered program comprising parent education, establishment of family media rules, monitoring of screen time through parental monitoring, guided technology use through active communication (parental mediation), and the provision of family activities without gadgets. Interventions involving parents through education, monitoring, and regulation of digital media use may help reduce uncontrolled gadget use (Domoff et al., 2022). In its implementation, nurses can play important roles as educators, counselors, and health promoters for adolescents and their families. Therefore, the researchers are interested in determining the effect of the Family-Based Screen Time Reduction Program on the level of gadget addiction among adolescents.

## **METHOD**

This study used a descriptive case study design to describe the implementation of the Family-Based Screen Time Reduction Program as part of family nursing care for adolescents experiencing gadget addiction. The case study was conducted among three families with adolescents experiencing excessive gadget use in Cempaka Putih Barat, RW 011. Participants were selected using purposive sampling based on predetermined inclusion criteria.

The subjects consisted of three families: Mr. D's family with Adolescent R, Mr. N's family with Adolescent Z, and Mrs. S's family with Adolescent A. The inclusion criteria were families with adolescents aged 12–18 years, adolescents who demonstrated excessive gadget use or a tendency toward smartphone addiction, families willing to participate in the entire intervention process, and adolescents and parents who were able to communicate and participate in the intervention activities. The intervention was conducted over three sessions across three consecutive days at each family's home.

The intervention was based on the Family-Based Screen Time Reduction Program, which actively involved both adolescents and parents. The program consisted of digital health education, family rules, parental monitoring, parental mediation, replacement activities, and the use of the Family Gadget Control Card (Kartu Kendali Gadget Keluarga [KKGK]). Digital health education was provided through leaflets and interactive discussions regarding healthy gadget use, risk factors for addiction, the effects of excessive use, and strategies for controlling gadget use. Family rules involved assisting families in establishing rules regarding the duration, timing, and location of gadget use. Parental monitoring was implemented by monitoring gadget-use duration and compliance with established rules, while parental mediation was conducted through communication and parental guidance during adolescents' gadget use. Replacement activities were provided by encouraging adolescents to engage in alternative activities without gadgets, such as reading, exercising, helping with household chores, and participating in family activities.

Data collection instruments included a family nursing assessment form, observation sheets, the Family Gadget Control Card (KKGK), and the Smartphone Addiction Scale–Short Version (SAS-SV). The KKGK was used to record gadget-use duration, compliance with established rules, and the development of the family's ability to monitor gadget use over the three-day intervention period. Smartphone addiction levels were measured using the SAS-SV before and after the intervention. Assessment of family capabilities was based on the five family health tasks: the ability to recognize health problems, make health-related decisions, care for family members, modify the family environment, and utilize healthcare services.

Data were collected through interviews, observations, instrument completion, and documentation throughout the family nursing care process. The implementation stages consisted of assessing the family's condition and gadget-use patterns, establishing nursing diagnoses, developing interventions, implementing the Family-Based Screen Time Reduction Program, and evaluating changes following the intervention. The SAS-SV was administered before and after the intervention, while gadget-use duration and compliance with established rules were recorded daily using the KKGK throughout the three-day intervention.

The data were analyzed descriptively by comparing conditions before and after the intervention in each family. The analysis included changes in gadget-use duration, changes in SAS-SV scores, changes in KKGK scores, and changes in the family's ability to perform the five family health tasks. The findings were presented in tables, graphs, and narrative descriptions to illustrate the changes observed across the three families. The study was conducted in accordance with ethical principles, including providing an explanation of the study objectives and procedures, obtaining consent from parents or legal guardians and adolescents, maintaining the confidentiality of participants' identities, and using the data solely for academic and scientific purposes. The identities of the families and adolescents were anonymized using initials.

## **RESULT**

### **Nursing Assessment**

The nursing assessment was conducted in three families with adolescents experiencing excessive gadget use: Mr. D's family with An. R, Mr. N's family with An. Z, and Mrs. S's family with An. A.

The assessment was conducted through interviews, observations, and first- and second-level family assessments. The findings showed that all three adolescents used gadgets for prolonged periods. The three families also lacked clear rules regarding gadget use and had not consistently monitored their adolescents. Previously, control of gadget use was mainly provided through verbal reminders or advice. The second-level assessment further showed that the three families had not optimally performed the five family health tasks: recognizing health problems, making decisions, caring for family members, modifying the family environment, and utilizing health-care services.

### Nursing Diagnoses

Based on the assessment findings, three nursing diagnoses were identified in all three families: **Ineffective Family Health Management (D.0117), Risk-Prone Health Behavior (D.0099), and Disturbed Sleep Pattern (D.0055)**. Diagnostic prioritization using a scoring method indicated that Ineffective Family Health Management was the priority diagnosis, with a score of 3.67. Risk-Prone Health Behavior received scores ranging from 3.33 to 3.50, while Disturbed Sleep Pattern was associated with the adolescents' habit of using gadgets late at night.

### Nursing Intervention

The intervention was based on the priority diagnosis of Ineffective Family Health Management through the *Family-Based Screen Time Reduction Program*, involving both parents and adolescents. The program consisted of *digital health education* to improve family knowledge of healthy gadget use, *parental mediation* and *parental monitoring* to strengthen parental involvement and supervision, *family rules* regarding the duration, timing, and setting of gadget use, and *replacement activities* to reduce adolescents' dependence on gadgets. The intervention also included the Family Gadget Control Card (KKGK) to monitor gadget use and adherence to family rules, environmental modification to support screen-time reduction, and education regarding the utilization of health-care services when necessary. The level of gadget addiction was measured before and after the intervention using the *Smartphone Addiction Scale–Short Version (SAS-SV)*.

### Nursing Implementation

The *Family-Based Screen Time Reduction Program* was implemented over three sessions with An. R, An. Z, and An. A. The implementation included health education, development of gadget-use rules, *parental monitoring*, *parental mediation*, replacement activities, use of the KKGK, environmental modification, and education regarding health-care services.

At the beginning of the implementation, the three families recognized excessive gadget use as an undesirable habit but had limited understanding of its causes, effects, and management strategies. After receiving *digital health education* through leaflets and interactive discussions, the families were able to explain healthy gadget use, the effects of excessive gadget use, and strategies for controlling it.

Initially, the three families had no structured *family rules* regarding gadget use. Following education and guidance, the families were able to establish rules concerning gadget-use duration, set gadget-free periods, and identify alternative activities while involving the adolescents in the decision-making process.

Following implementation of the program, the families were able to monitor gadget use through *parental monitoring*, *parental mediation*, *family rules*, *replacement activities*, and the KKGK. Gadget-use duration decreased from 5 to 3 hours/day for An. R, from 6 to 3 hours/day for An. Z, and from 4 to 2.5 hours/day for An. A. KKGK monitoring scores increased from 1 to 2 for An. R, from 0 to 2 for An. Z, and from 1 to 2 for An. A. In addition, SAS-SV scores decreased from 25 to 21 for An. R, from 31 to 28 for An. Z, and from 27 to 22 for An. A. These findings indicate positive changes in gadget-use control among all three adolescents following the intervention.

## KKGK Evaluation

Evaluation using the Family Gadget Control Card (KKGK) demonstrated improved ability among the three adolescents to regulate gadget use over the three sessions. For An. R, gadget use decreased from 5 hours on the first day to 4 hours on the second day and 3 hours on the third day, while the monitoring score increased from 1 to 2. An. R also began following the agreed rules and engaging in replacement activities such as reading, exercising, and helping parents care for chickens. For An. Z, gadget use decreased from 6 hours to 4 hours and then to 3 hours, while the monitoring score increased from 0 to 1 and then to 2. An. Z began reducing gadget use while studying, helping with household chores, engaging in physical activities, and interacting with family members. For An. A, gadget use decreased from 4 hours to 3 hours and then to 2.5 hours, while the monitoring score increased from 1 to 2 and remained at 2. An. A engaged in alternative activities such as reading, playing badminton, helping parents, and interacting with family members. Overall, the final KKGK scores were highest for An. A (5/6), followed by An. R (4/6) and An. Z (3/6).

## SAS-SV Evaluation

Table 1.

Pre-test and post-test results using the SAS-SV showed a decrease in scores among all three adolescents.

| Adolescent | Pre-test | Category | Post-test | Category | Reduction |
|------------|----------|----------|-----------|----------|-----------|
| An. R      | 25       | Moderate | 21        | Low      | 4         |
| An. Z      | 31       | High     | 28        | Moderate | 3         |
| An. A      | 27       | Moderate | 22        | Low      | 5         |

An. Z changed from the high category to the moderate category, while An. R and An. A changed from the moderate category to the low category. Overall, the evaluation demonstrated reduced gadget-use duration, improved KKGK monitoring scores, and decreased SAS-SV scores following implementation of the *Family-Based Screen Time Reduction Program*.

## DISCUSSION

The assessment showed that the three adolescents used gadgets for prolonged periods, while their families had not established structured rules or consistent monitoring. This indicates that problematic gadget use is influenced not only by individual behavior but also by family management and supervision. During adolescence, self-control is still developing, making family guidance and support important in establishing healthy technology-use habits (Saputro, 2018; Efendi et al., 2024).

The findings also indicated that the families had limited understanding and management of excessive gadget use. Therefore, Ineffective Family Health Management was identified as the priority nursing diagnosis. The family-based approach is relevant because families play an important role in recognizing health problems, making decisions, modifying the home environment, and supporting behavioral changes among adolescents (Fau, 2023). Excessive gadget use may also be associated with emotional, behavioral, and sleep problems among adolescents (Nur Rizki & Suryati, 2022; Rif'ah et al., 2024).

The Family-Based Screen Time Reduction Program addressed the problem through digital health education, parental mediation, parental monitoring, family rules, replacement activities, the Family Gadget Control Card (KKGK), environmental modification, and education about health-care services. This comprehensive approach involved both adolescents and parents in the behavior-change process. Previous studies have demonstrated that parental mediation and monitoring are important factors associated with problematic smartphone use among adolescents (Chen et al., 2025; Meng et al., 2025).

Following digital health education, the families demonstrated improved understanding of the risks associated with excessive gadget use and ways to manage it. The families were also able to

establish family rules concerning the duration, timing, and circumstances of gadget use. This finding suggests that education can strengthen the family's ability to make appropriate decisions and implement consistent strategies. Parental strategies that provide clear boundaries and monitoring have been shown to contribute to reducing problematic smartphone use among adolescents (Efrati et al., 2024).

The intervention resulted in a reduction in gadget-use duration among all three adolescents. An. R's use decreased from 5 to 3 hours/day, An. Z's from 6 to 3 hours/day, and An. A's from 4 to 2.5 hours/day. This reduction suggests that structured family rules, parental monitoring, and behavioral support may help adolescents regulate their gadget use. These findings are consistent with evidence that parental involvement is important in managing problematic smartphone use among adolescents (Chen et al., 2025; Efrati et al., 2024).

The KKGK monitoring scores also improved. An. R's score increased from 1 to 2, An. Z's from 0 to 2, and An. A's from 1 to 2. The improvement indicates that families became more capable of monitoring gadget use and adolescents became more involved in following agreed-upon rules. Parental monitoring is considered an important mechanism through which parents can guide and regulate adolescents' smartphone-related behavior (Meng et al., 2025).

The reduction in gadget use was accompanied by the emergence of alternative activities. An. R engaged in reading, exercise, and helping parents care for chickens; An. Z participated in household activities, physical exercise, and family interaction; while An. A engaged in reading, badminton, helping parents, and family interaction. These activities provided alternatives to screen use and encouraged physical activity and direct social interaction, which are important components of healthy adolescent behavior (World Health Organization, 2022).

The SAS-SV results further supported the positive changes following the intervention. An. R's score decreased from 25 to 21, An. Z's from 31 to 28, and An. A's from 27 to 22. The largest reduction occurred in An. A, with a decrease of 5 points. The SAS-SV is a validated instrument for assessing smartphone addiction among adolescents, making it useful for evaluating changes in problematic smartphone use following an intervention (Kwon et al., 2013).

The changes in SAS-SV scores were consistent with the reduction in gadget-use duration and improvement in KKGK monitoring. An. Z changed from a high to a moderate category, while An. R and An. A changed from moderate to low. These findings suggest that improved parental involvement and behavioral regulation may contribute to reduced problematic smartphone use. However, differences among the adolescents may reflect variations in baseline behavior, self-control, adherence to family rules, and family involvement (Khasanah & Winarti, 2021; Mumbaasithoh et al., 2021).

Overall, the intervention demonstrated positive changes in all three adolescents, reflected by reduced gadget-use duration, improved KKGK monitoring scores, and decreased SAS-SV scores. The findings support the use of a family-based approach combining parental education, monitoring, clear family rules, alternative activities, and environmental modification to manage problematic gadget use among adolescents (Chen et al., 2025; Efrati et al., 2024; Meng et al., 2025).

However, these findings should be interpreted as preliminary because the intervention was conducted over only three sessions. The sustainability of the behavioral changes therefore requires continued monitoring after the intervention. Families are encouraged to continue using the KKGK, maintaining family rules, conducting consistent parental monitoring, and providing alternative activities. Longer-term follow-up is important because sustained parental strategies have been

shown to be relevant in maintaining improvements in problematic smartphone use among adolescents (Efrati et al., 2024).

## CONCLUSION

The Family-Based Screen Time Reduction Program improved the families' ability to manage adolescent gadget use through family rules, parental monitoring, parental mediation, education, and replacement activities. After three intervention sessions, all five family health tasks were achieved, with reductions in daily gadget use among An. R (5 to 3 hours), An. Z (6 to 3 hours), and An. A (4 to 2.5 hours), accompanied by decreased SAS-SV scores. These findings indicate that a family-based approach can support better management of gadget use and reduce problematic smartphone use among adolescents, although continued monitoring is needed to maintain the improvements.

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