The Effectiveness of The Get Resih Application to Improve Clean and Healthy Living Behavior (CHLB) in Children

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Abstract

This study aims to test the effectiveness of the Get Resih Application to increase knowledge of Clean and Healthy Living Behavior (CHLB) in children. The method used is a quasi-experimental design with a pre-post group design. The study population consists of 22 kindergarten students who were randomly selected. The sampling technique is total sampling consisting of 11 experimental group and 11 a control group. The experimental group was given the Get Resih treatment – a knowledge scale of clean and healthy living behaviors used in the pretest and posttest. The results were analyzed using independent t-test and paired t-test samples. The results showed that there was a significant increase in CHLB knowledge between pretest and posttest scores in the experimental group. Meanwhile, in the controlled group, no significant knowledge of CHLB was found. It can be concluded that the Get Resih application can increase CHLB knowledge in children.

Keywords: CHLB, Children, Get Resih.

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Introduction

Covid-19 encourages every individual to change habits in activities, one of the activities that must be accustomed to doing is compliance with health protocols. The implementation of health protocols

should be based on knowledge and skills of good clean and healthy living behavior (CHLB) (Novikasari & Dewi, 2021) With this learning process, knowledge insight will increase, so it is expected to be able to review and interpret something that happens in his life and is expected to be able to socialize and practice a healthy way of life (Kanro et al., 2017); (Vionalita & Kusumaningtiar, 2017).

Indonesia's health status is strongly influenced by CHLB (Kusumawardani, & Fitriyani, 2019). CHLB also greatly affects the growth and development of children in daily activities. Good intellectual power should be supported by good nutrition and accompanied by a healthy lifestyle. A clean and healthy lifestyle in early childhood maintains health, cleanliness and maintains the child's immune system by providing nutritious nutrition. Early childhood children are vulnerable to contracting diseases such as decreased immunity, therefore the role of parents needs to be to supervise their children's activities while at home (Ulfadhilah, 2021). Healthy children are seen doing active physical activity and usually do not want to stay silent because their period is an exploratory period (Tabi'in, 2020).

School-age children are a very vulnerable group of children are at risk of health problems and are often exposed to disease, most of which occur due to poor clean and healthy living behavior (CHLB), which has a big impact on children's health (Damanik, 2023). Early childhood education (PAUD) and elementary school or equivalent are the targets of CHLB implementation in educational institutions (Permenkes Number 15 of 2014). This is done as an effort to improve the degree of health by changing unhealthy people's behavior to be healthy from an early age (Abidah & Huda, 2018); (Nurmahmudah et al., 2018). School age, including early age, is the golden age in growing CHLB so that these children are expected to become agents of change to promote CHLB (Mardhiati, 2019).

Strengthening CHLB is not always the task of teachers in schools. The condition of offline and online educational activities due to the emergency response period of the Covid-19 pandemic requires parents to be able to replace the role of teachers in schools, so parents must be creative in teaching

children, especially for PAUD parents who should also be able to create play while learning activities (Anhusadar & Islamiyah, 2020).

Play activities are the right method to stimulate children's development by carrying out activities that are serious but still fun and entertaining for children (Rahmanda & Zulkarnaen, 2024). Knowledge education is not only related to learning materials but also education about covid 19, especially CHLB education. Parents are expected to be able to build a more pleasant home atmosphere so that children understand more about covid 19 information and do not feel bored at home (Anhusadar & Islamiyah, 2020). In addition, efforts to deliver information and select educational media are very important and need to be considered because the correct selection and delivery will provide maximum results (Hanif et al., 2019); (Prasetyanti & Yanuaringsih, 2019).

The same thing was explained by (Saputra et al., 2018) and (Maimun & Erawan, 2017) explaining that efforts to increase CHLB can be applied through household CHLB coaching. Where the implementation of CHLB is carried out by every family member at home, without exception. The responsibility of each family member in the implementation of CHLB accelerates the achievement of CHLB indicators. Parents become important mediators in the implementation of CHLB in the household.

Health education methods that have been widely implemented one of them is the game method. Games as a health promotion medium make it easier for children to absorb and remember health education materials (Ministry of Health, 2013; (Susanto et al., 2016) it becomes more fun and children don't get bored quickly, so information will be easy to grasp. (Hartati Bahar, 2024) Game media is categorized as a fun media and brings joy in learning so that the brain is more easily stimulated and fosters confidence in children. In addition, (Mustika, 2021) and (Kurniasih et al., 2022) explained that other digital-based media such as gadgets, computers, and television are packaged in such a way that they are interesting to be seen as health education media for children.

The use of multimedia as an information medium, involving the senses of hearing, sight and touch simultaneously is able to absorb 80% of the information provided (Subagyo et al., 2022). Studies on the application of games to CHLB with the use of android applications, props in the form of cards have proven effective (Kridalukmana & Martono, 2016); (Sutriyanto et al., 2017); (Handayani et al., 2020) Furthermore, (Saputra et al., 2018) have compiled a healthy Indonesia module to improve clean and healthy living behavior of jungle children. One of the props used is a game media called Get Resih. This shows that game media can be developed using other instruments. in increasing CHLB in children.

This research aims to bridge the gap explained through the previous literatures which studied about the implementation of health education through android app as the game platform to make it easier for the children to absorb information and remember the health education lessons. It is also more enjoyable for kids. This research emphasizes the CHLB indicator based on medical protocol and early childhood needs including knowledge and skill related to healthy food and beverage, attitude toward personal hygiene, attitude toward environmental sanitation, attitude toward illness and disease by using android app media as the practical, informative and enjoyable media.

Theoretical Framework

clean and healthy living behavior is any conscious behavior done by member of the family or the family can help themselves related to health condition and can be actively take role in health activities in the society (Indonesian Dept of Health, 2016). The implementation of CHLB is determining the health status, in which the individuals consciously and personally motivated to keep healthy and prevent the decease. School age (including early childhood) is the golden age to cultivate clean and healthy living behavior and having potency to be the agent of change to promote clean and healthy living behavior in school environment, family and society. The optimum growth and development of the early childhood kids depend on health behavior the implement. Healthy lifestyle for early childhood kids including

eating and drinking; personal hygiene; environmental sanitation; attitude toward illness and disease; balance behavior (regular exercise, rest and enough sleep) (Astuti, 2016).

Saputra et al., 2018) studied about the urgency of clean and healthy living behavior to prevent contagious illness due to lack of kids personal hygiene in daily activities. This research produce clean and healthy behavior module that becoming the foundation of app product called get resih. Get resih becomes clean and healty behavior stimulation promotion for early childhood kids which shows them knowledge related to healthy eating and drinking habit; personal hygiene; attitute toward environmental sanitation; attitude toward illness and disease and as the clean and healthy living behavior indicator.

Method

Research Procedure

Research procedure is the steps used to collect data to answer the research questions which were proposed in this research. With the discussion about research design, research sample, research instrument (get resih app, module, and other props), the instrument development process, data collection technique and data analysis.

Design

The method used is a quasi-experimental design with a pre-post control group design. The research method utilized in this study is a quasi-experimental design with a pre-post control group design. Quasi-experimental research serves the purpose of determining the impact of the experiment or treatment on the subjects' characteristics, as influenced by the researcher. This type of research involves the use of two sample groups: one receiving the treatment or intervention (experimental group) and the other serving as a control. The aim of this research is to identify effective interventions or treatments for CHLB. Both the experimental and control groups were selected randomly

(Sugiyono, 2019). Table 1 provides an overview of the quasi-experimental design employed in the study.

Table 1
Research Design

Group	Pretest	Treatment	Posttest
EG	O1	X	O2
CG	O1	-	O2

Description :
EG = Experiment Group
CG = Control Group
O1 = Pretest
O2 = Posttest
X = Get Resih Treatment

Pretest

Before the treatment, a pretest was conducted to determine the knowledge of clean and healthy living behavior of the participants before they were treated as part of research.

Treatment

In the experimental group, the treatment was carried out in the form of board game media and the Get Resih application for children for three days. The treatment is carried out daily for about 50 minutes. Figure 1 shows three sessions of Get Resih.

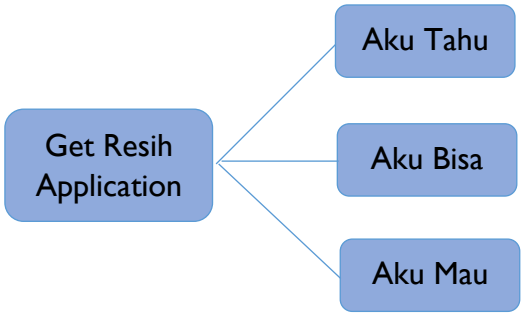


Figure 1. Get Resih Session

Posttest

After the treatment was given, a posttest was carried out in the form of collecting knowledge data on clean and healthy living behavior in the experimental and control groups. The data collection instrument on the posttest has the same scale as the pretest.

Participants

Participants in this study were kindergarten students aged 5-6 years. Most of them are six years old (60%) and female (40%). The research population consisted of 22 kindergarten children who were randomly selected.The sampling technique is total sampling consisting of 11 experimental group and 11 a control group. Informed consent is given to the parents of participating participants before the pretest is conducted. Informed consent contains information about the research needs for participants, including risks in the study, and the researcher's responsibility for the negative impacts obtained, and the distribution of compensation to participants in the research process.

Data Collection Instrument

In this study, a CHLB knowledge to children scale was developed base on CHLB indicators, including knowledge of healthy and unhealthy food types in children, types of healthy and unhealthy behaviors, and skills in cleaning themselves and the environment, skills in choosing healthy snack consumption (Saputra et al., 2018). The scale consists of 28 items with a Cronbach alpha the reliability was 0.87

Get Resih Application

The get resih game aims to provide CHLB knowledge to children including 1) knowledge of healthy and unhealthy food types in children, types of healthy and unhealthy behaviors, and 2) skills in cleaning themselves and the environment, skills in choosing healthy snack consumption (Saputra et al., 2018).

The get-resih props (table 2) are arranged based on the components of clean and healthy living behavior described as personal hygiene, environmental hygiene, knowledge of healthy/unhealthy food, knowledge of health support equipment needed by adjusting the needs of the game.

Table 2
Get Resih Props

Props	Function
Board Game Base	Base game with various signs/symbols and game challenges
Virtual Card	Question tool asked to game participants
Pion	Tools used as intermediaries for participants that run on board game base
Dice	Instructions for steps that must be passed by participants according to the number of participants in the game

The get resih module has been validated with the help of professional judgment with some development suggestions. The get resih module is shown in table 3.

Get Resih Media is divided into 3 forms, namely board game media, props media, supporting props media such as dice, pawns, rewards coins, and the packaging used. The media used can be seen in figure 2.

Figure 2. Get Resih Media

Table 3
Get Resih Module

Game 1 (Aku Tahu)	
Tools used	Virtual cards, coin rewards
Time/number of participants	100 minute/ 4 participants
Activities Design	The child is asked to name the type of healthy / unhealthy food, type of behavior or unhealthy, body hygiene tools and the environment
Purpose	Introducing types of healthy and unhealthy foods, types of healthy and unhealthy behaviors and introducing tools to cleanse the body independently
Game 2 (Aku Mau)	
Tools used	Boardgame, Sticker, coin rewards
Time/number of participants	60 minute/ 4 participants
Activities Design	Children are asked to attach stickers / glue the crequette of body hygiene tools in accordance with the body parts that must be cleaned
Purpose	Gives children the skills to cleanse the body independently.
Game 3 (Aku Bisa)	
Tools used	Board Game, virtual card, coin rewards, pion, dice
Time/number of participants	30 minute/ 4 participants
Activities Design	The child is asked to roll the dice to determine the number of steps on the playing mat. If the steps stop at the do box, the child is asked to practice the skills that match the picture. If in the don't box, the child is asked to practice how to prevent others who do not maintain personal and environmental hygiene.
Purpose	Give children the skills to practice skills to clean themselves, clean the environment in the do and the don't games.

a) Board Game Media

Board game media is arranged using albatross cardboard with a size of 40 x 40 cm

b) Props Card Media

Props Card Media are compiled with the help of smart apps creator (SAC) applications. SAC is a digital interactive media used to build multimedia content for mobile devices. This application can be used on IoS and Android with output extensions including HTML5 and .exe. This makes the app compatible across all devices and touch monitors (smartappscreator.com). Product design in the form of this application is expected to help designers / researchers in compiling game props cards with the use of line applications so that this product is more environmentally friendly (paperless).

c) Supporting Props Media

Supporting props media in the form of coins and pawns are designed using natural materials in the form of coconut shells and useless wood materials. The dice measures 2 cm in which there is a sign point that shows how many steps of activity. Coins measuring 4 cm in diameter are used as rewards for participants who give answers according to the desired expectations.

d) Image Design

Image design used are reviewed through colors, character images, image flows. The color of the board game is dominated by purple which represents creativity, and wisdom that is expected to grow in each participant. The other side of the board game is also colorful which means the joy and flexibility of the participants. The image of the character displayed in the digital card is a picture of boys and girls in certain situations, especially in healthy and healthy life behavior activities. The situations depicted in the picture are arranged in the setting of the house, and the surrounding environment.

Professionals have validated the game Get Resih. This validation stage is carried out by 3 (people) validators who are considered professionals in their fields according to researchers. Validators are purposively selected, namely teachers, parents, public health practitioners. The results of the module validation assessment in the valid criteria, can be seen in table 4.

Table 4
Validator Assesment

Sub Activity	Aims	Description of the content and form of activities	Validators			Total Value	∑s	V	Validity Level
			1	2	3				
Aku Bisa	Carry out environmental cleaning and personal hygiene activities, and choose healthy snacks / foods	Practice self-cleaning activities (washing hands, brushing teeth, shampooing using shampoo, cutting nails, cutting hair etc.)	3	3	4	10	7	0,58	Moderate
		Practice environmental cleaning activities (sweeping the house, yard, throwing garbage in its place, tidying up clothes in the closet, washing etc.)	3	4	4	11	8	0,67	High
		Practice choosing healthy foods for consumption	3	3	4	10	7	0,58	Moderate
Aku Mau	Get to know activities for Personal Hygiene	Match pieces of images that fit your needs for self-cleaning	2	3	3	8	5	0,42	Moderate
Aku Tahu	Know the types of healthy / unhealthy foods / snacks	Mention the name of the introduced vegetable	2	4	3	9	6	0,5	Moderate
		Mention the name of the fruit provided	3	4	4	11	8	0,67	High
		Mention the name of snacks / healthy foods that can be consumed	3	3	3	9	6	0,5	Moderate

Table 4
Validator Assesment

Sub Activity	Aims	Description of the content and form of activities	Validators			Total Value	∑s	V	Validity Level
	Know the Types of Health Support Equipment	Show what equipment is used for personal hygiene through personal hygine posters & stickers	3	4	4	11	8	0,66	High

Data Analysis

Independent Sample T-Test and Paired T-Test are used to test hypotheses with software JASP 18.2.0. The paired t-test tested the difference in pretest and posttest scores in both groups, while the independent sample t-test tested the difference in pretest and posttest scores between groups.

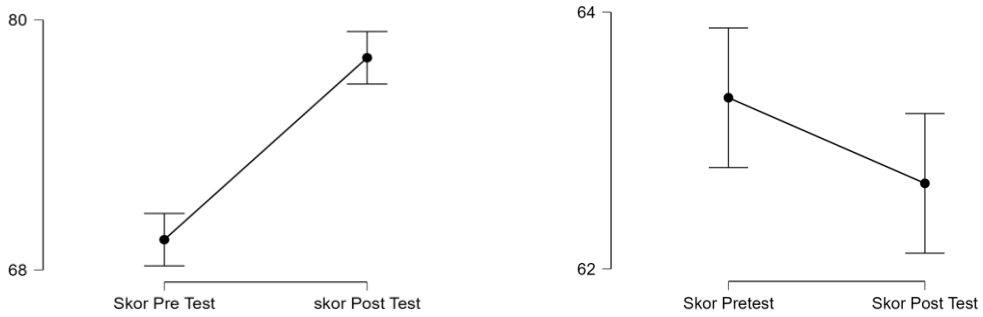
Result

The results of statistical descriptions, including the mean and standard deviation, normality, homogenity of the pretest scores and posttest scores in the experimental and control groups, are shown in the following table 5

Table 5
Statistical Overview

Group	Score	Mean	Standard Deviation	Normality	Homogenity
Experiment	Pre-Test	69.445	2.73	0.092	0.181
	Post-Test	78.182	3.97	0.373	
Control	Pre-Test	63.333	0.82	0.107	0.515
	Post-Test	62.667	1.19	0.442	

Figure 3 below shows the difference in the average pretest-posttest scores of the experimental group compared to the control group. In the experimental group, there was an increase in the average score from pretest to posttest, while in the control group the average score was relatively the same.



(a) (b)

Figure 3. Average difference between experimental group (a) and control group (b)

The following table shows the results of data analysis. Based on the Paired T-Test, there was a significant difference between the average pretest and posttest scores in respondents in the experimental group. These results show that the average posttest score is higher than the pretest.

Therefore, knowledge of clean and healthy living behavior in the experimental group increased after receiving the Get Resih game treatment. In contrast, there was no significant difference between the average pretest and posttest scores in respondents in the control group. These results meant that in the control group, knowledge of clean and healthy living behaviors remained the same despite a slight increase in scores.

Based on the Independent Sample T-Test, there was a difference in pretest scores between the experimental group and the control group. These results showed that knowledge of clean and healthy

living behavior in the experimental group was different before the Get Resih game was given. In addition, the mean posttest scores in the experimental and control groups differed significantly. The average posttest score in respondents in the experimental group was higher than in the control group.

Table 6

The t-test result

T-Test	Variabel	T Value	Sig. (2-tailed)
Paired Sample T-Test	Pre-Test EG dan Post-Test EG	-10.926	<.001
	Pre-Test CG dan Post-Test CG	2.000	.081
Independent Sample T-Test	Pre-Test EG dan Pre-Test CG	1.740	.097
	Post-Test EG dan Post-Test CG	7.725	<.001

Description :
EG : Experiment Group
CG : Control Group

Discussion

Clean and Healthy Living Behavior (CHLB) is every behavior which consciously done by the early childhood kids to help themselves/have initiative to stay fit and prevent the illness (Susanto et al., 2016). School age is the golden period to cultivate healthy and clean lifestyle and can be the agent of change to promote healthy and clean lifestyle both in school environment, family and society.

The optimal growth and development of early childhood depends on the healthy behavior carried out. These include habits related to diet and hydration, personal hygiene, maintaining a clean environment, attitudes towards illness and disease, as well as balanced behavior such as regular exercise and adequate rest and sleep (Astuti, 2016).

(Saputra et al., 2018) studied about the important of clean and healthy living behavior to prevent contagious disease due to environmental factor and unhealthy air which affect the kids immunity from viruses, bacteria, parasite and others. As it is easy for the early childhood kids contaminated by this disease is because of the lack of personal hygiene in daily activities especially in practising clean and healthy living behavior.

This study aims to test the effectiveness of the Get Resih Application to increase knowledge of Clean and Healthy Living Behavior (CHLB) in children. The results showed that there was a significant increase in CHLB knowledge between pretest and post-test scores in the experimental group. Meanwhile, in the controlled group, no significant increase in CHLB knowledge was found.

The Get Resih application has been successfully presented as one of the android applications used to stimulate CHLB knowledge in children. The Get Resih application describes knowledge about CHLB in board game settings which are arranged based on the components of clean and healthy living behavior which are described, namely personal hygiene, environmental hygiene, knowledge of healthy/unhealthy food, knowledge of health support equipment needed by adjusting to game needs. (Rahayu et al., 2023) through board games, children can practice to play and learn.

This application material was compiled through the results of previous research (Saputra et al., 2018). This Get Resih application uses multimedia elements such as sound instruments and virtual card features. This is expected to increase children's interest in playing Get Resih. This application has been assessed by validators namely teachers, parents, and public health practitioners. This application falls under valid criteria. The validity criteria are in the medium and high categories of each assessment criterion.

This Get Resih research supports research effective (Kridalukmana & Martono, 2016); (Sutriyanto et al., 2017); (Handayani et al., 2020), who tried to explain that games in increasing CHLB can be done with the use of android applications, with a quasi-experimental approach in elementary school children using card games as props, and showed that health education with games succeeded in introducing clean and healthy living behaviors in children. Furthermore, this study also emphasizes the use of technological elements to strengthen the information obtained by children, especially by providing images in the form of virtual cards, which are expected to motivate and improve children's skills and abilities related to clean and healthy living behavior and can maintain this knowledge.

The Get Resih application is expected to be able to present and disseminate traditional game literature, which is limited to in-game media. It is expected that the Get Resih application can be accessed by anyone and anywhere because the concept of digital media is in great demand by the public in the current era. The use of gadgets that can be accessed by everyone, not only parents but also children, makes this application provide an opportunity for the development of information about Clean and Healthy Behavior (CHLB) knowledge to be more comprehensive.

Conclusion

The Get Resih application, which consists of three sessions, has succeeded in increasing knowledge of Clean and Healthy Living Behavior (CHLB) in children. Virtual card displays and board games, which include natural images, text, shapes, and color-seeming color perspectives, have a sense of fun and flexibility that encourages children to be interested in playing these games. The experience of participants in the Get Resih game strengthens information about knowledge of types of healthy and unhealthy foods in children, types of healthy and unhealthy behaviors, as well as self-cleaning skills and the environment, and skills in choosing healthy snack consumption. Therefore, the Get Resih application can be a useful tool in increasing CHLB knowledge which is expected to build and develop children's skills to implement clean and healthy living behaviors.

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Conflict of Interest
The researchers declare that this paper has no conflicts of interest.

Author Contribution
All authors have contributed equally to the study's conceptualization, interpreting data, reviewing, and editing the manuscript.

Data Availability
Data can be provided upon request to the author.

Declarations Ethical Statement
The study followed the guidelines of the Declaration of Helsinki.

Informed Consent Statement
Informed consent was obtained from all persons involved in the study.

Reference

Abidah, Y. N., & Huda, A. (2018). Pelaksanaan program perilaku hidup bersih dan sehat (phbs) di sekolah luar biasa. Jurnal Ortopedagogia, 4(2), 87–93. doi: 10.17977/um031v4i12018p087

Anhusadar, L., & Islamiyah, I. (2020). Penerapan perilaku hidup bersih dan sehat anak usia dini di tengah pandemi covid 19. Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini, 5(1), 463. doi: 10.31004/obsesi.v5i1.555

Astuti, A. K. (2016). Pelaksanaan perilaku sehat pada anak usia dini di paud Purwomukti Desa Batur Kecamatan Getasan. Scholaria: Jurnal Pendidikan Dan Kebudayaan, 6(3), 264. doi: 10.24246/j.scholaria.2016.v6.i3.p264-272

Damanik, A. S. (2023). Hubungan perilaku hidup bersih dan sehat (phbs) dengan kejadian giardiasis pada anak di lingkungan sempakata kuta medan selayang. http://ecampus.poltekkes-medan.ac.id/xmlui/handle/123456789/7663

Depkes RI. Keputusan Menteri Kesehatan RI Nomor 1114/Menkes/SK/VII/2006 tentang Pedoman Pelakasanaan Promosi Kesehatan di Daerah. Jakarta : Depkes RI. 2006.

Handayani, L., Husna, H., Septiyani, E., Mona, J. R. S. La, Mahendra, M. A., Ma'ruf, Y. M., Khusna, R. M., & Hariyono, W. (2020). Edukasi kesehatan menggunakan permainan leghezo (let's go to the health zone). Dinamika Journal: Pengabdian Masyarakat, 2(2). doi: 10.20884/1.dj.2020.2.2.968

Hanif, M. F., Ririanty, M., & Nafikadhini, I. (2019). Efektivitas buku saku PHBS di sekolah dalam meningkatkan perilaku hidup bersih dan sehat. Jurnal Kesehatan, 6(2), 46–53. doi: 10.25047/j-kes.v6i2.15

Hartati Bahar, P. (2024). Edukasi makanan sehat dan 6 langkah cuci tangan di TK WahdahIslamiyah di Kota Kendari. 1(1). doi: 10.37887/vj.v1i1.2

Kanro, R., Yasnani, & Saptaputra, S. K. (2017). Gambaran kinerja petugas rekam medik di rumah sakit umum daerah kota Kendari tahun 2017. Jurnal Ilmiah Mahasiswa Kesehatan Masyarakat, 2, (7). Haluoleo University.

Kridalukmana, R., & Martono, K. T. (2016). Pembuatan aplikasi permainan "Ayo Sehat" berbasis android. Jurnal Teknologi Dan Sistem Komputer, 4(2), 315. doi: 10.14710/jtsiskom.4.2.2016.315-321

Kurniasih, I., Asmawati, L., & Rosidah, L. (2022). Pengaruh aplikasi hand wash squad terhadap perilaku hidup bersih dan sehat anak usia 5-6 tahun Di Kecamatan Serang. PAUDIA: Jurnal Penelitian Dalam Bidang Pendidikan Anak Usia Dini, 11(2), 573–584. doi: 10.26877/paudia.v11i2.13316

Kusumawardani, L. H., & Fitriyani, P. (2019). Improving diarrhoeal and clean and healthy living behavior (PHBS) through collaboration socio-dramatic play (Ko-Berdrama) in school age children. Sri Lanka Journal of Child Health, 48(3), 240–245. doi: 10.4038/sljch.v48i3.8759

Maimun, D. N., Dupai, L., & Erawan, P. E. M. (2017). Pengaruh kesmas cilik dalam meningkatkan pengetahuan, sikap dan tindakan perilaku hidup bersih dan sehat murid kelas V Sekolah Dasar Negeri 12 Poasia Kota Kendari Tahun 2016. Haluoleo University.

Mardhiati, R. (2019). Guru Paud: Pendidikan perilaku hidup bersih dan sehat (PHBS) anak usia dini. Journals.Upi-Yai.Ac.Id.http://journals.upi-yai.ac.id/index.php/IKRAITH-ABDIMAS/article/download/603/449

Mustika, D. (2021). Sistem informasi edukasi pencegahan covid-19 pada anak usia dini menggunakan metode multimedia development life cycle berbasis android. Jurnal Elektro Luceat, 7(2), 1:7. http://118.97.29.116/index.php/jelekn/article/view/407

Novikasari, L., & Dewi, R. (2021). Perilaku hidup bersih dan sehat (PHBS) pada anak usia dini sebagai upaya pencegahan covid-19 di Paud Kemuning Jaya Bandar Lampung. Jurnal Kreativitas Pengabdian Kepada Masyarakat (Pkm), 4(6), 1524–1529. doi: 10.33024/jkpm.v4i6.4965

Nurmahmudah, E., Puspitasari, T., & Agustin, I. T. (2018). Perilaku hidup bersih dan sehat (PHBS) pada anak sekolah. ABDIMAS: Jurnal Pengabdian Masyarakat, 1(2), 46–52. doi: 10.35568/abdimas.v1i2.327

Prasetyanti, D. K., & Yanuaringsih, G. P. (2019). Pengaruh permainan ular tangga terhadap perilaku hidup bersih dan sehat (PHBS) pada anak sekolah dasar. Jurnal Penelitian Keperawatan, 5(1). doi: 10.32660/jurnal.v5i1.335

Rahayu, D., Indryani, I., & Wulandari, B. A. (2023). Pengembangan media sex kids education (Skidu) berbasis board game untuk anak usia dini. Jurnal Muara Pendidikan, 8(1), 83–95. doi: 10.52060/mp.v8i1.1179

Rahmanda & Zulkarnaen. (2024). Studi dampak pendampingan orang tua dalam jam belajar sekolah Paud usia 4-5 Tahun. Lib.Unnes.Ac.Id, 5(1), 1–12. doi: 10.37985/murhum.v5i1.428

Saputra, N. E., Ekawati, Y, N., Kalsum, U. (2018). Validasi modul outbond sehat indonesia untuk meningkatkan perilaku hidup bersih dan sehat anak orang rimba. Konferensi Nasional Psikologi (FrenPsi) 2018. Universitas Muhammadiyah Purwokerto, 1–11.

Saputra, N. E., Kalsum, U., & Ekawati, Y. N. (2018). Upaya Meningkatkan pengetahuan dan keterampilan perilaku hidup bersih dan sehat (phbs) orang rimba melalui pembinaan PHBS rumah tangga. JPPM (Jurnal Pengabdian Dan Pemberdayaan Masyarakat), 2(2), 297. doi: 10.30595/jppm.v2i2.2590

Sugiyono. (2019). Metode Penelitian Kuantitatif, Kualitatif, dan R & D. Alfabeta.

Subagyo, W., Wahyuningsih, D., & Mukhadiono. (2022). Pengembangan Aplikasi Mobile Games Healthy Kids Sebagai Media Promosi Perilaku Hidup Bersih Dan Sehat Pada Anak Oleh. *Open Journal Systems*, *17*(1978), 235–242.

Susanto, T., Sulistyorini, L., Wuryaningsih, E. W., & Bahtiar, S. (2016). School health promotion: A cross-sectional study on Clean and Healthy Living Program Behavior (CHLB) among Islamic Boarding Schools in Indonesia. International Journal of Nursing Sciences, 3(3), 291–298. doi: 10.1016/j.ijnss.2016.08.007

Sutriyanto, K., Raksanagara, A. S., & Wijaya, M. (2017). Pengaruh permainan kartu kasugi terhadap peningkatan pengetahuan perilaku hidup bersih dan sehat pada siswa. Jurnal Sistem Kesehatan, 1(4). doi: 10.24198/jsk.v1i4.12828

Tabi'in, A. (2020). Perilaku hidup bersih dan sehat (PHBS) pada anak usia dini sebagai upaya pencegahan covid 19. JEA (Jurnal Edukasi AUD), 6(1), 58. doi: 10.18592/jea.v6i1.3620

Ulfadhilah, K. & N. N. (2021). Penerapan pola hidup bersih dan sehat pada anak usia dini era pandemi covid-19. Aulad: Journal on Early Childhood, 4(3), 151–159. doi: 10.31004/aulad.v4i3.101

Vionalita, G., & Kusumaningtiar, D. (2017). Knowledge of clean and healthy behavior and quality of life among school-children. In Health Science International Conference (HSIC 2017), 431–436. doi: 10.2991/hsic-17.2017.67