JKM (Jurnal Kebidanan Malahayati),Vol 9, No. 1. January 2023,
ISSN (Print) 2476-8944 ISSN (Online) 2579-762X, Hal 15-22

EFFECTIVENESS OF MOTHER SMART ONLINE CLASS ON EARLY DETECTION SKILLS ON CHILD GROWTH

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ABSTRAK : EFEKTIVITAS KELAS ONLINE CERDAS IBU KETERAMPILAN DETEKSI DINI PERTUMBUHAN ANAK

Latar Belakang: Berdasarkan hasil Riskesdas 2013, diketahui 34,3% balita di Indonesia tidak mendapatkan pemantauan tumbuh kembang. Pada masa pandemi, terdapat pembatasan aktifitas berskala mikro yang berdampak ditiadakannya posyandu. Dengan demikian diperlukan suatu metode yang dapat meningkatkan kemampuan ibu untuk memantau pertumbuhan anaknya secara mandiri. Salah satu upaya yang dapat dilakukan adalah membentuk kelas ibu pintar online yang bertujuan untuk meningkatkan keterampilan ibu dalam deteksi dini pertumbuhan balita. Kelas ibu pintar online dipandang paling efektif pada masa pandemi, karena dapat mengurangi kontak fisik.

Tujuan: untuk menganalisis efektifitas Kelas Ibu Pintar Online Terhadap Keterampilan Deteksi Dini Pertumbuhan Balita.

Metode : Desain Penelitian adalah *Quasi eksperimen* dengan pendekatan *pre and post-test design with control group.* Subjek penelitian adalah ibu yang memiliki balita di Kelurahan Cilendek Timur, Kota Bogor, terdiri dari 2 kelompok, yaitu kelompok intervensi dan kelompok kontrol. Sampel penelitian dipilih secar non-random, dengan jumlah 30 orang ibu pada setiap kelompok. Pada kelompok intervensi diberikan pretest, kemudian diberikan edukasi tentang pertumbuhan balita pada kelas online melalui Whatsapp Group. Kegiatan intervensi berlangsung selama 2 minggu, dengan jumlah pertemuan 6 kali. Diakhir pertemuan, dilakukan Post-test pengetahuan dan observasi keterampilan ibu dalam melakukan pemantauan pertumbuhan balita serta menginterpretasikannya. Pada kelompok kontrol, responden diberikan pre test diawal kegiatan dan post tes pada akhir kegiatan. Penelitian dilakukan pada bulan Maret-Oktober 2021. Variabel independent dalam penelitian ini adalah kelas ibu pintar online. Sedangkan variabel independentnya adalah keterampilan deteksi pertumbuhan balita. Variabel diukur dengan kuesioner. Analisa data dengan uji mann-whitney

Hasil: didapatkan Sebagian besar responden berpendidikan SMP dan SMA dengan usia antara 20-35 tahun, memiliki anak lebih dari 1 dan tidak bekerja (Ibu Rumah Tangga) dan penghasilan seluruh responden di bawah UMK Kota Bogor. Pendidikan ibu, Usia Ibu, Paritas, Pekerjaan dan Penghasilan tidak berpengaruh terhadap Keterampilan Deteksi Dini Pertumbuhan Balita dengan nilai P > 0.005. Terdapat peningkatan Pengetahuan dan Keterampilan ibu pada kelompok intervensi dalam mendeteksi pertumbuhan balita usia 3-5 tahun di Kota Bogor. Terdapat perbedaan rerata pengetahuan dan keterampilan ibu sebelum dan setelah diberikan edukasi melalui kelas ibu pintar online.

Kesimpulan: Kelas Ibu pintar online dapat meningkatkan pengetahuan dan keterampilan ibu dalam mendeteksi pertumbuhan balita usia 3-5 tahun di Kota Bogor.

Saran: Bidan sebagai salah satu tenaga kesehatan yang berperan dalam pemantauan pertumbuhan bayi dan balita perlu memiliki berbagai strategi agar dapat melibatkan peran ibu dalam pemantauan pertumbuhan anak. Salah satu strateginya dalam penelitian ini adalah membuat kelas online. Strategi lain untuk menguatkan kelas online ini bisa di lakukan pendampingan offline dengan tetap memperhatikan prokes.

Kata Kunci: Kelas Ibu, Deteksi Dini, Pertumbuhan, anak

ABSTRACT

Background: Based on the results of the 2013 Riskesdas, it is known that 34.3% of toddlers in Indonesia do not receive growth and development monitoring. During the pandemic, there were restrictions on micro-scale activities, resulting in the absence of posyandu. Thus we need a method that can improve the ability of mothers to monitor their child's growth independently. One effort can be made to form an online smart mother class that aims to enhance mothers' skills in the early detection of toddler growth. Online smart mom class is the most effective during a pandemic because they can reduce physical contact.

Purpose: The study aimed to analyze the effectiveness of the Mother Smart Online Class on early detection skills for toddler growth.

Methode: The research design is a *quasi*-experimental approach with pre and post-test design with the control group. *The research subjects were mothers who had tod*dlers in East Cilendek Village, Bogor City, consisting of 2 groups: the intervention and the control group. The research sample consisted of 30 mothers in each group—chosen non-randomly. The intervention was to educate about toddlers' growth in online classes. The study was conducted in March-October 2021. The independent variable in the study was the Mother Smart Online Class. The independent variable is the skill of detecting toddlers' growth. Variables were measured by questionnaire—analysis of the data using the Mann-Whitney test.

Methods: The research design is a quasi-experimental approach with a pre and post-test design with a control group approach. The research subjects were mothers who had toddlers in East Cilendek Village, Bogor City, consisting of 2 groups: the intervention group and the control group. The research sample was randomly selected non-randomly, with 30 mothers in each group. The intervention group was given a pre-test and then given education about toddler growth in online classes via the Whatsapp Group. The intervention activities lasted for two weeks, with a total of 6 meetings. At the end of the meeting, a post-test of knowledge and observation of mothers' skills was conducted to monitor toddler growth and interpret it. In the control group, first, respondents were given a pre-test and then a post-test at the end of the activity. The research was conducted in March-October 2021. The independent variable in this study was the online smart mom class. At the same time, the independent variable is toddler growth detection skills. Questionnaires measure variables—data analysis with Mann-Whitney test.

Conclusion: Mother smart online class increased the knowledge and skills of mothers in detecting the growth of toddlers aged 3-5 years

Sugesstions: Recommendations, Midwives, as one the health workers who have a role in monitoring the growth of infants and toddlers, need to have various strategies to involve the role of mothers in monitoring child growth. One of the strategies in this research is to make online classes. Another strategy to strengthen this online class can be offline mentoring while still paying attention to the progress.

Keywords: Mother's class, early detection, growth, toddlers

INTRODUCTION

Age under five years old (toddler) is a crucial period in the growth process because, in that age range, there is an acceleration of child growth and development (Saurina *et al.*, 2015). The growth and development of children under five are very dependent on parenting. What is meant by parenting includes basic needs like nutrition and stimulation needed so that children can grow and develop optimally (Soetjiningsih and Ranuh, 2013). the size of various body organs; and development is a process of increasing the ability, structure, and function of the body, which is more complex as a result of and maturation of cells (Soetjiningsih & Ranuh, 2013). The optimization of children's growth and development has decreased (Kemenkes RI, 2021). Based on the results of Riskesdas 2013, it is known that 34.3% of children under five in Indonesia are not monitored for growth and development. (Sutardji, Budijanto and Hardhana, 2017) According to WHO's SDG data, in 2013, children under five in Indonesia experienced several growth irregularities, namely 34.6% stunting, 13.5% malnutrition, and 11.5% obesity (WHO, 2017). Meanwhile, in West Java, children aged 0-59 months were known to be malnourished as much as 2.4% of, undernourished, 12.1% of, and 1.3% of children with overnutrition status (Sutardji, Budijanto and Hardhana, 2017).

Toddler growth can be measured through weight gain, height, and head circumference. In connection with mothers' less active role in monitoring their children's growth, efforts are needed to improve the ability of mothers with toddlers to monitor the growth of children under five. Health education delivered can use a variety of media. The media used must be appropriate and adapted to the target conditions because the use of media can affect the absorption and retention of the material delivered. Smartphone technology is an excellent opportunity to be used as a medium in health education activities. From the literature review by Leonita (2018) regarding the role of social media in health promotion efforts, empirical evidence shows that social media is effective in carrying out health promotion efforts to increase understanding and support the community for healthy behaviour (Leonita and Jalinus, 2018).

The Covid-19 pandemic, which began to spread worldwide in early 2020, has impacted various aspects of Indonesia. Since April 2020, various strategies have been implemented to reduce transmission and mortality due to Covid-19.

 DOI 10.33024, http://ejurnalmalahayati.ac.id/index.php/kebidanan

Likewise, in the health aspect, various adaptations and adjustments can provide the best service to the community during a pandemic. Bogor is one of the cities with a high number of Covid. Even as of October 2020, the Micro-Scale Activity Restriction policy is still being implemented. Health services in communities where large numbers of people gather are suspended indefinitely. Likewise with Posyandu. Of course, the absence of a posyandu impacts monitoring the growth of children under five.

Thus, efforts are needed to improve mothers' knowledge and skills to monitor toddlers' growth safely during this covid pandemic. One of the efforts to improve the skills of mothers in monitoring the growth of toddlers is in the form of online classes. Hasanuddin's (2002) research in Pancarijang showed that online education could increase knowledge and public health behaviour (Hasanuddin and AL, 2022).

The difference between the current research and the previous research lies in the media used in this research; classes are held via WhatsApp media with assistance and monitoring from a facilitator for each class. Classes run according to the modules' stages and plans, and the material used is standard so that it can be duplicated to hold classes elsewhere. (Wahyuni *et al.*, 2022).

Based on the above background, the researcher is interested in researching "The effectiveness of Mother Smart Online Class on early detection skills of toddler growth".

RESEARCH METHODOLOGY

This research is a quasi-experimental study, using a *pre and post-test design approach with a control group*.

Table 1
Research Design

	Pretest Posttest	Family Class	Online
Class Group (P-1)	01	X	02
Control Group (P-2)	03	-	04

In the previous intervention group, a pre-test was conducted, and the intervention was given via WhatsApp. After the intervention, observations were made. The pre-test and post-test were carried out in the control and intervention groups. The research location was in East Cilendek Village, Bogor City, in January-December 2021. The location was chosen because, in that area, the number of toddlers is significant, and it is a red zone affected by covid.

The target population in this study is mothers of toddlers in the Bogor City area. In comparison, the affordable population is mothers who have toddlers 3-5 years old in East Cilendek Village, Bogor City. The number of samples was 30 people in each intervention and control group—retrieval of research data using a questionnaire that has been tested for validity and reliability. The questionnaire contains sociodemographic questions and knowledge about children's growth. Data analysis was performed with univariable and bivariable analysis with the Mann-Whitney test.

RESEARCH RESULT

Table 2 shows that most of the respondents have junior high and high school education with ages between 20-35 years. Most respondents have more than one child and do not work (housewives). The income of all respondents is below the regional minimum wage of Bogor City. From the results of the analysis of all characteristic variables, namely maternal education, maternal age, parity, occupation and income, there is no effect on early detection skills of toddler growth with a P value > 0.005

Table 2
Characteristics of Respondents

Variables	Group			
	Control	Intervention	Total	P
Mother's Education				
Elementary	5	5	10	
Junior	11	11	22	1,000
High School	14	14	28	
Mother's Age				
<20	1	1	2	
20-35	22	21	42	0.998
>35	7	8	16	
Parity (Number of Children)				
1	5	6	11	
2	12	13	25	1,000
3	7	8	15	
4	6	3	9	
Employment				
Housewive	17	18	35	1,000
Working	13	12	25	
Income				
< Bogor Minimum Wage (4,196,000)	30	30	60	
> Bogor Minimum Wage (4,196,000)	0	0	0	

*Kolmogorov Smirnov Test

Table 3
Analysis of Maternal Knowledge and Skills Scores Regarding Early Detection of Growth of Toddlers Aged 3-5 Years in Bogor City

Variable	N	Median (Min-Max)	Mean + sb	P
Knowledge Ex. Control				
Pre Test	30	24 (16-26)	23.7 + 2,385	0.739*
Post Test	30	24 (16-26)	23.40 + 2.207	
Knowledge Ex. Intervention				
`Pre Test	30	24 (16-26)	23.5 + 2,301	0.000*
Post Test	30	25 (20-28)	25.17 + 1.704	
Skill Post Test				
Intervensi	30	30 (27-30)	29.80 + 2.235	0.000**
Control	30	23.5 (20-25)	23.78 + 1.363	

*Wilcoxon **Mann Whitney

Table 3 shows that in the intervention group, there was an increase in the average value of pre and post-knowledge by 2 points. Based on Wilcoxon data analysis, the increase is assumed to be significant due to the intervention. In the control group, there was an average decrease of 0.3 points in the post-test knowledge value, with a p-value > 0.05, so there was no significant change in the knowledge of the control group both in the pre-test and post-test. In the skill score, there were differences in the intervention and control groups, with a P value of < 0.005.

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Table 4
Analysis of Differences in Knowledge and Skills of Mothers Before and After Being Educated Through Online Smart Mothers Class

Group	N	Median (Min-Max)	Mean + sb	P
Knowledge of				
Intervention	30	25 (20-28)	25.17 + 1.704	0.001*
Control	30	24 (16- 26)	23.40 + 2.207	
Skills				
Intervention	30	30 (27-30)	29.80 + 2.235	0.000*
Control	30	23.5 (20-25)	23.78 + 1.363	

*Mann Whitney Test

In the post-test knowledge score, the mean score in the intervention group was 2 points higher than the control group's value; statistically, the change was significant with a p-value of < 0.05. In the post-test skill scores, the average value was 3 points higher in the intervention group, and the change was statistically significant with a p-value of p <0.05.

DISCUSSION

Table 2 shows that maternal education, age, parity, occupation and income do not affect early detection skills of toddler growth. In this study, maternal education, age, parity, occupation and income did not affect early detection skills of toddler growth because many parents or mothers hand over their child's growth monitoring to health workers such as midwives, paediatricians, general practitioners or health facilities such as Posyandu, Puskesmas or Hospitals. Due to the COVID-19 pandemic, the implementation of monitoring activities for children's growth and development has been limited. According to research by Saraswati (2021), cadres can overcome this problem by providing home-based posyandu services (mobile posyandu).(Saraswati, 2021) Another solution in this study is to train mothers in online classes to ensure every mother has skills in caring for and detecting her child's growth. The knowledge and stimulation skills possessed by the mother will affect the child's development (Hastuti *et al.*, 2009)Pitchik *et al.*, 2018)(UNICEF, 2021).

Table 3 shows that in the intervention group, there was an increase in the average pre- and post-knowledge value. In the skill scores, there were differences in the scores of the intervention and control groups. In this study, the intervention carried out was to provide training in online classes through *Whatsapp Groups* with the aim that each mother had skills in caring for and detecting the growth of her children. After the respondent was given the intervention, the respondent was observed for his skills in monitoring the growth and development of the child. The result is an increase in the knowledge and skills of mothers in detecting child growth. The results of this study follow the results of Wahyuni's research on online education, which showed an increase in the average knowledge of 2.9 points in Tegal village and 3.4 points in Jampang village after being given online education (Wahyuni *et al.*, 2022).

This study's results align with Leonita's (2018) statement that social media can increase public access to health information and promote positive behaviour change.(Leonita and Jalinus, 2018) Thus, social media can collaborate and complement conventional health promotion. Social media can be a powerful tool with broad reach and interactivity. Some empirical evidence finds exciting things to using social media for disease prevention interventions, such as smoking cessation through Tweets and health sites, YouTube videos about cancer, increasing adolescent knowledge about reproductive health, patient knowledge about diabetes and understanding about fitness and physical activity through Facebook.

In this era of increasingly modern information and communication technology, health promotion efforts are innovating by using digital strategies focusing on the young population who actively uses gadgets. Many conveniences are obtained in meeting the community's needs, such as through mobile phones*(smartphones).* Several hospitals and even health centres have taken advantage of advances in digital technology and are increasingly actively using social media as a tool for health promotion. The need for accurate, precise, and up-to-date information is increasingly needed along with the rapid development of information technology, especially in the health sector. Social media through the internet has great potential to carry out health promotion and other health interventions, and it is easier to reach targets at every level. (Leonita and Jalinus, 2018)

The *smartphone*s technology is an excellent opportunity to be used as a medium in health

education activities. From the literature review by Leonita (2018) regarding the role of social media in health promotion efforts, empirical evidence shows that social media is effective in carrying out health promotion efforts to increase understanding and support the community for healthy behaviour.(Leonita and Jalinus, 2018) Thus, in this study, using smartphones (digital) to form online classes can be recommended as a means of health promotion or health education to increase the knowledge and skills of mothers to detect child growth. This early detection skill is vital for mothers as primary caregivers to optimize the growth and development of their children (Lucas, Richter and Daelmans, 2018)(Nuriyanto, Rahayuwati and Lukman, 2022)(Wina, 2012)(Riyadi *et al.*, 2011)(Setiyati, Sukesi and Esyuanani, 2016)(Nabilah, Hastuti and Lathifah, 2021)(Nahar *et al.*, 2012).

In Table 4, the online classroom intervention has a significant effect in increasing the knowledge and skills of respondents. In this study, the media used was an online class through a WhatsApp group where the senses used to add information (knowledge) were the senses of sight and hearing. (Pereira *et al.*, 2020) Although only two senses are involved, information can be appropriately conveyed with the right strategy. The research result in Pancarijang found that online education can improve public health knowledge and behaviour (Hasanuddin and AL, 2022). Health education must follow technological advances in order to obtain optimal results. The results of other studies also show that using digital media can improve the language development of children aged 3-5 years (Operto *et al.*, 2020)(Susilo, 2019).

Mothers' ability to screen children's growth can be done using various media, one of which is through flyer media; this is following the results of research by Nurfurqoni et al. in Bogor, which showed that education through flyers could improve mothers' skills. (Nurfurqoni, Nuryati and Fitria, 2019) Likewise with print media in the form of educational fans (Nuryati *et al.*, 2021). However, it is unfortunate that the media is challenging to use during the pandemic. So we need other educational media that are more appropriate. It is crucial to increase maternal knowledge through various effective educational media. This is important because, according to the results of Syahailatua's research, increasing mothers' knowledge about growth and development is related to the growth and development of toddlers. (Syahailatua and Kartini, 2020)

Indonesia is one of the countries with the most WhatsApp users and the highest number of hours of use. Thus WhatsApp is familiar to respondents and fun to use. In such a situation, delivering information using WhatsApp becomes easily accessible. Several studies comparing online learning media (WhatsApp and conventional/offline face-to-face) found no significant difference. In the study in Turkey in 2020, it was found that there was no difference in the level of knowledge after the intervention between the intervention group (WhatsApp online class) and the control group (offline). they involved the visual, audio and motor body(Gonenc, 2020). Several research results show that online and digital media also increase people's knowledge and behaviour in various aspects. (Hasanuddin and AL, 2022)(Chandra, 2021)(Fatima, Hastuti and Riany, 2020)(Pereira *et al.*, 2020)(Tandilangi, Mintjelungan and Wowor, 2016). However, WhatsApp online classes also have the advantage that they are easy to access, can be opened anywhere, and can be repeated, so in the end, WhatsApp online classes are also effective in increasing the knowledge and skills of respondents. Education through this online class can be carried out, but it depends on how the facilitator builds communication in the class. For the health message to be delivered properly, the mass communication must adapt to the respondent's background (Nurfurqoni, 2013).

CONCLUSION

Most respondents have junior high and high school education and are between the ages of 20 and 35. Most respondents have more than one child and do not work (housewives). The income of all respondents is below the regional minimum wage of Bogor City. Mother's education, maternal age, parity, occupation and income affect early detection skills of toddler growth with a P value > 0.005. There is an increase in the knowledge and skills of mothers in the intervention group in detecting the growth of toddlers aged 3-5 years in Bogor City. There is a difference in mothers' average knowledge and skills before and after being educated through the online smart mother class. One of the strategies in this research is to make online classes. Another strategy to strengthen this online class can be offline mentoring while still paying attention to the progress.

SUGESSTIONS:

Recommendations, Midwives, as one the health workers who have a role in monitoring the growth of infants and toddlers, need to have various strategies to involve the role of mothers in monitoring child growth. One of the strategies in this research is to make online classes. Another strategy to

 DOI 10.33024, http://ejurnalmalahayati.ac.id/index.php/kebidanan

strengthen this online class can be offline mentoring while still paying attention to the progress

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