

KIE Based on Android on Parents' Compliance in Giving Basic Immunization in Infants before the Age of 1 Year in the Time of the Covid -19 Pandemic

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Abstract:-

Background:

Basic immunization is one of the prevention programs of infectious diseases for children. Objective: This study is to identify the effectiveness of the Android-based KIE on parents' compliance in giving basic immunizations in infants before the age of 1 year in the Covid -19 pandemic period. Method: quasy experimental pre-post test with control group. Samples amounted to 40 people with systematic random sampling. The instrument used by the questionnaire in the form of google form about parents' compliance regarding the basic immunization distributed through the WhatsApp application.

Results and Discussion: The results of the T dependent test are obtained there is an influence of the Android-based KIE on parental compliance in the provision of basic immunizations in infants before the age of 1 year in the Covid -19 pandemic period ($p = 0.003$). **Conclusion:** Kie-based Android is effective against parents' compliance in giving basic immunizations in infants before the age of 1 year in the time of the Covid -19 pandemic. **Suggestion:** It is expected that health workers can provide information and education communication (KIE) as a promotive effort especially regarding the implementation of basic immunizations in intensive and structured pandemic times and considering educative animated media and animated videos so that they can be more effective and efficient.

I. INTRODUCTION

Immunization is one of the efforts for effective essential public health to provide specific immunity to diseases that can be prevented by immunization (PD3I) ⁽¹⁾. According to the Indonesian Children's Doctor Association (IDAI) ⁽²⁾ measles are still the main cause of death in Indonesian children. Infectious diseases are measles and tuberculosis are two of several infectious diseases that can be prevented by immunization. According to WHO ⁽³⁾ an effort that can be made to reduce the infant mortality rate is with the given immunization.

Non-compliance with immunization One of them is due to the lack of parental knowledge about the importance of basic immunization so that not a few people who bring

their babies to immunize only one time or vaccine that the protection is long, the delay in the agreed immunical schedule will lead to increased risk of being infected by an avoided disease ⁽⁴⁾.

The problem of non-compliance with the administration of immunization is increasing in the pandemic period because of access barriers due to the termination of immunization services and the decline in demand is caused by the community feared Covid-19, found constraints of supply due to the immunization program managers and immunization resources transferred to handling Covid-19, limited protective equipment Self for safe immunization and commodity shortages ^(5,6). The existence of Covid-19 that occurred globally since being designated as the Public Health Emergency of International Concern (PHEIC) has an impact on the implementation of health programs especially immunization services and surveillance PD3I ⁽⁷⁾.

Based on data obtained from Gavi, WHO and UNICEF said that at least 80 million children less than 1 year have a risk of suffering from diphtheria, measles and polio due to disruption of routine immunization services in the middle of the Covid-19 pandemic. There are 64% of 107 countries experiencing disruption or delays in the implementation of routine immunization services and 60 countries delay the implementation of immunization campaigns, especially measles and polio. In Indonesia, data on immunization coverage in January to April 2020 compared with 2019 in the same period of time showed a decline from 0.5% to 87%. In OPV4 coverage, the biggest decline occurred in April 2020 compared to April 2019 which was 46.5%. This is certainly at risk for the Extraordinary Event (KLB) ⁽⁸⁾.

Based on the initial survey conducted by researchers at Paal X Puskesmas Jambi City was found 10 parents 5 of them stated that they did not routinely bring their babies to health facilities during the pandemic period to get immunization for fear of contracting the Covid-19 virus, besides that there were also 3 parents Feeling confused about the schedule of the baby's immunization because the policy of taking a distance imposed during the pandemic period and 2 parents stated that they did not get accurate information about the importance of maintaining the continuation of immunization during a pandemic.

The use of leaflet media and animated videos in this study is very necessary to achieve the goal of KIE in providing an understanding of parents' compliance in giving basic immunizations in infants before the age of 1 year in the Covid Pandemic period -19⁽⁹⁾. Therefore the use of media will be concerned in providing communication, information and education.

II. MATERIAL AND METHOD

This research is a quantitative study using research design "quasy experimental pre-post test with control group"⁽¹⁰⁾.

The population in this study are those who have children aged 1-12 months in the working area of Paal X Puskesmas, Jambi City with 182 mothers.

The sampling technique used in this study is a probability sampling technique with the Systematic Random Sampling method, namely sampling selected from the population systematically carried out by sorting the population members, then selected a particular order systematively from the population list. Great sample of 40 respodens. The instruments used by the questionnaire in the form of google form about parents' compliance regarding the basic immunization distributed through the WhatsApp application.

III. RESULTS

The influence of the Android-based Kie on parents' compliance in giving basic immunizations in infants before the age of 1 year in the Covid-19 pandemic period in the intervention and control group can be seen in the following table:

Table 1 Effect of Educational Information Communication (KIE) Based on Android on parents' compliance in giving basic immunizations in infants before the age of 1 year in the Pandemic Covid-19 period (in the Intervention and Control group) (n = 40)

Adherence of parents	Group Intervention			Group Control		
	Mean	n	p Value	Mean	n	p Value
Obedience						
<i>Pre Test</i>	1.40	40	0.003	1.33	40	0.323
<i>Post Test</i>	1.60	40		1.35	40	

Based on Table 1 about the influence of android-based educational information communication (KIE) on parents' compliance in giving basic immunizations in infants before the age of 1 year in the Covid-19 pandemic period (in the intervention and control group) used statistical test paired sample t-test (t Dependen) is found in the value of P value in the intervention group (P = 0.003) which means there is an influence of educational information communications (KIE) Android Nerbasis on

parents' compliance in giving basic immunizations in infants before the age of 1 year in the Covid-19 pandemic period while in the control group The value of p value = 0.323 means that there is no / no effect of educational information communication (KIE) based on Android-based significantly on parents' compliance in giving basic immunizations in infants before the age of 1 year in the Pandemic Covid-19 period.

The differences in parental compliance regarding basic immunization in infants before the age of 1 year in the Covid-19 pandemic period before and after being given treatment between intervention groups with the control group with independent T statistical tests viewed from the following table:

Table 2 Differences in Parents Compliance About Basic Immunization in Infants Before the age of 1 year in the Covid-19 pandemic period before and after being given treatment between intervention groups with the control group (n = 40)

Obedience	Pre Test		p Value	Post Test		p Value	Deviation
	Mean	SD		Mean	SD		
Group Intervention	1.40	0.496	0.474	1.60	0.496	0.002	0.202
Group Control	1.33	0.474		1.35	0.483		

Table 2 shows about the differences in the average adherence of parents about the basic immunization of infants before the age of 1 year in the Covid-19 pandemic period before and after being given treatment between the intervention group and the control group with the T-independent statistical test found P Value Pre Test Compliance 0.474 (p> 0.05) Which means there is no difference in the average Pre Test of parents' compliance at Paal X Health Center with the Yemeni Puskesmas Yemeni and this can also be interpreted that the data is homogeneous.

Furthermore, the average difference in adherence of parents between intervention groups and the control group with T-independent statistical tests was found in the average score of the 160 intervention compliance test test, the control group 1.30 with the P value 0.002 (p <0.05) which means There is a difference in adherence of parents at Paal X Health Center with the Yemeni Puskesmas Tahtul Yemen. This means that the treatment given by researchers in the intervention group has succeeded in increasing its compliance.

IV. DISCUSSION

The influence of the Android-based Kie on parents' compliance in giving basic immunization in infants before the age of 1 year in the Covid-19 pandemic period

Based on the research on the effect of educational information communication (KIE) based on Android on parents' compliance in giving basic immunizations in infants

before the age of 1 year in the Pandemic Covid-19 period (in the Intervention and Control group) used statistical test paired sample t-test (dependent t) Established P Value Compliance Value in the Intervention Group (P = 0.003) while in the P value control group = 0.323. This means that there is a significant effect of Android-based KIE against parents' compliance in the provision of basic immunizations in infants before the age of 1 year in the pandemic period of Covid-19 at Paal X Puskesmas Jambi City and there is no influence on parents' compliance at the Yemen City Tahtul Puskesmas Jambi.

Research Sandlya⁽¹¹⁾ proves that there is an influence of health education with educational video media on maternal knowledge about complete basic immunization in the Covid-19 pandemic period. Furthermore, Dayani⁽¹²⁾ also found the result that with KIE effectively against compliance in giving basic immunization. So it can be concluded that communication, information, education (KIE) carried out continuously and gradually, can increase the knowledge and attitudes of parents and caregivers in giving basic immunization⁽¹³⁾. In addition, KIE can also change behavior in a better direction⁽¹⁴⁾.

Leaflets and videos include the type of media that can be used to deliver KIE. In addition, social media can also be used as a KIE tool to be able to convey information and education messages about the basic immunization both through WhatShapp, Facebook, Twiter, Instagram, Line, or Milistgroup (14). The objectives of the use of education communication media can facilitate the understanding of mothers and maternal compliance in giving immunization⁽¹⁵⁾.

The use of leaflet media in this study contains information about the implementation of basic immunizations with the design of writing, images and interesting colors. According to John Potter & Julian McDougall⁽¹⁶⁾ the advantages of the leaflet media can adjust the mothers to learn independently at home, the mother can see its contents more relaxed, information can be shared well with family and neighbors, can provide details using images for message reinforcement⁽¹⁵⁾.

The use of videos in Kie is not just as a tool but a carrier of information / messages you want to convey. Video use can clarify the abstract picture of the importance of basic immunization, because in the process of giving not only to hear the material being delivered but also look directly and clearly about basic imitations in infants before the age of 1 year in the Covid-19 pandemic period. Through these videos can explain the mind, feeling, attention, interest interest in in such a way and eventually arise understanding, understanding and appreciation of what was explained⁽¹⁵⁾.

According to the assumption of researchers, the influence of Kie against parents's compliance is because Kie can provide new information to the mother. Information from the intervention is a new cognitive foundation for mothers in the form of attitude. Information received with a positive attitude can improve parents' compliance in giving

basic immunization. In addition, the media used by the researcher presents video images while leaflets are positive attitudes that do not give knowledge in theory but also address about compliance in the provision of basic immunization

Based on findings found by researchers, it is expected that increasing knowledge can change a person's attitude towards a particular object. Therefore android-based educational information communication (KIE) with leaflet media and videos are very important so that it can affect the acceptance of parents who can then influence maternal compliance in giving basic immunization.

Differences in the average knowledge, attitudes and actions of mothers take care of toddlers of diarrhea between intervention groups conducted by educational information communications (KIE) with integrated media with the control group (return sheets)

Based on the results of the study, it can be seen that the average difference in adherence of parents between groups of intervention and the control group with T-independent statistical tests was found in the average score of the Intervention Compliance Test of the 1.60 intervention, the control group 1.35 with P value 0.002 (P < 0.05) Which means there is a difference in adherence of parents at the Paal X Puskesmas Jambi City with the Yemeni Tahtul Health Center. This means that the treatment given by researchers in the intervention group has succeeded in increasing its compliance.

The results of this research are in line with Eka⁽¹⁷⁾ at the Bay Santosa Health Center in Labuhan Batu Regency which found the results of a significant difference from compliance (P = 0.009) respondents in conflict management between intervention groups with the control group. The intervention group provided by Kie has a much better compliance than the group that is not treated.

Based on research that had been conducted by researchers at Paal X Puskesmas Jambi City with Yemeni Tahtul Health Center. The difference in the average compliance of immunization can be seen in the analysis of the description of the questionnaire which shows that the intervention group respondents have a higher adherence average compared to the respondent control group. In addition to this, from the analysis of the description of the questionnaire can also be seen any differences in increasing the average value between the two groups. In the intervention group an increase in the average compliance value (0.200) while in the control group, an increase in the average value of compliance was 0.025.

The reason for the average difference and an increase in the value of compliance between the two groups according to the assumption of the researcher is due to the intervention group to get the treatment of Kie-based Anroid and the control group did not get treatment at all.

The Android-Based Kie is intended as communication, information and education submitted by using media that can be disseminated through applications available in Android which are very often used by people such as what, Facebook and Instagram. The KIE media in question was made based on the community's needs on the understanding of the importance of the implementation of complete basic immunizations during the Covid-19 pandemic period obtained through public complaints found in Android applications on the problem.

According to the assumption of researchers, parents who have been given Kie-based Android will better understand and have better immunization compliance compared to parents who are not given KIE at all. Therefore researchers hope that the Paal X Puskesmas to be able to socialize the Android-based KIE activities in other health centers in the working area of Jambi City Health Center, so that parents in the health center can be more obedient in giving immunization.

V. CONCLUSION

The Android-based KIE is effective against parents' compliance in giving basic immunizations in infants before the age of 1 year in the Covid -19 pandemic period.

SUGGESTION

See the magnitude of the benefits of Android-based KIE in increasing parents' compliance in giving basic immunizations in infants before the age of 1 year in the Covid -19 pandemic period, researchers expect it so that health workers, especially nurses to always provide educational information communication (KIE) based on Android And the video to parents regarding the implementation of immunization so that parents' compliance increases.

REFERENCES

- [1]. Doherty M, Buchy P, Standaert B, Giaquinto C, Prado-Cohrs D. Vaccine impact: Benefits for human health. *Vaccine* [Internet]. 2016;34(52):6707–14. Available from: <http://dx.doi.org/10.1016/j.vaccine.2016.10.025>
- [2]. Ikatan Dokter Anak Indonesia. Lembar Fakta Poliomiellitis, Rubella, dan Campak. 2016;
- [3]. World Health Organization. Immunization Coverage. 2019
- [4]. Gessner BD, Feikin DR. Vaccine preventable disease incidence as a complement to vaccine efficacy for setting vaccine policy. *Vaccine* [Internet]. 2014;32(26):3133–8. Available from: <http://dx.doi.org/10.1016/j.vaccine.2014.04.019>
- [5]. Saso A, Skirrow H, Kampmann B. Impact of COVID-19 on immunization services for maternal and infant vaccines: Results of a survey conducted by imprint—the immunising pregnant women and infants network. *Vaccines*. 2020;8(3):1–15.
- [6]. Abbas K, Procter SR, van Zandvoort K, Clark A, Funk S, Mengistu T, et al. Routine childhood immunisation during the COVID-19 pandemic in Africa: a benefit–risk analysis of health benefits versus excess risk of SARS-CoV-2 infection. *Lancet Glob Heal*. 2020;8(10):e1264–72.
- [7]. Chandir S, Arif D, Mehmood M, Setayesh H, Siddique M, Mirza A, et al. Impact of COVID-19 pandemic response on uptake of routine immunizations in Sindh , Pakistan: An analysis of provincial electronic immunization registry data. *Vaccine* [Internet]. 2020;38(45):7146–55. Available from: <https://doi.org/10.1016/j.vaccine.2020.08.019>
- [8]. Kemenkes RI. Buletin Surveilans Pd3i & Imunisasi. In: 2nd ed. Jakarta; 2020.
- [9]. Kementerian Kesehatan R. Pedoman Peningkatan Penerapan MTBS. Jakarta: Direktorat Bina Kesehatan Anak; 2015.
- [10]. Sugiyono. Metode Penelitian Kuantitatif, Kualitatif, R & D. Bandung: CV Alfabeta; 2016.
- [11]. Sandlya waskitha tarigan. Pengaruh pendidikan kesehatan dengan media video edukatif terhadap pengetahuan ibu tentang imunisasi dasar lengkap di masa pandemi covid-19 di puskesmas minas tahun. 2021.
- [12]. Dayani TM. Efektivitas Pendidikan Kesehatan Terhadap Pengetahuan dan Kepatuhan Ibu dalam Pemberian Imunisasi Dasar pada Bayi Usia 0-11 Bulan di Wilayah Kerja Puskesmas Purnama Pontianak Selatan. *J Prones*. 2018;4(1):1–10.
- [13]. Hirsh V, Blais N, Burkes R, Verma S, Croitoru K. Management of diarrhea induced by epidermal growth factor receptor tyrosine kinase inhibitors. *Curr Oncol*. 2014;21(6):329–36.
- [14]. Kemenkes RI. Pedoman Pelaksanaan Kegiatan Komunikasi, Informasi, Edukasi (KIE) Kesehatan Untuk Petugas Kesehatan di Tingkat Pelayanan Dasar. Jakarta; 2013.
- [15]. Levitskaya A, Management T, Instit E, Vinogradova S, Melnik G, Foundation RS. Media Education. 2018. № 1. *J Hist theory Pract media Educ*. 2018;(March).
- [16]. John Potter • Julian McDougall. Digital Media, Culture and Education. 2017.
- [17]. Eka Purnamasari. Pengaruh penyuluhan dengan metode ceramah disertai media leaflet terhadap perubahan perilaku ibu dalam pemberian imunisasi dasar [internet]. Universitas Sumatera Utara; 2016. Available from: <http://repositori.usu.ac.id/bitstream/handle/123456789/27636/137032044.pdf?sequence=1&isAllowed=y>