

THE EFFECTIVENESS OF INFORMATION AND EDUCATION COMMUNICATION (IEC) THROUGH LEAFLET AND AUDIOVISUAL MEDIA TO INCREASING KNOWLEDGE OF REPRODUCTIVE-AGE WOMEN (RAC) ABOUT LONG-TERM CONTRACEPTIVE METHODS (LARC) IN URBAN

Yati Isnaini Safitri¹, Lailatul Khusnul Rizki², Siska Nurul Abidah³, Rizki Amalia¹

^{1,2,3}, Department of Midwifery, Faculty of Nursing and Midwifery, Universitas Nahdlatul Ulama Surabaya, 60237 Surabaya, East Java, Indonesia

Corresponding Author: yati@unusa.ac.id

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Abstract

Communication, Information and Education (IEC) is one of the important steps to support and make the public aware of the goals of Family Planning. Education is an important part of the counseling process. To date, there are quite a lot of IEC options that are considered effective in increasing contraceptive use, but each method still has shortcomings.

This research aims to compare the effectiveness of Communication, Information and Education (IEC) using leaflets and audiovisuals in increasing the knowledge of Fertile Age Couples (RAC) about Long-Term Contraceptive Methods (LARC) in urban areas.

This research is a quantitative research with a research design *Quasy experiment design* with a plan *one group pretest posttest design* which was conducted in July-August 2024 in Surabaya involving 60 RAC aged 30-49 years as samples. The research subjects were divided into 2, namely the group that received intervention through audiovisual media, and those that received intervention through leaflet media without a control group, then a knowledge assessment was carried out in each group. Data were analyzed using Mann-Whitney with significance = 0.05.

The results show that the average RAC knowledge about LARC using the leaflet method is 22.75 and the average RAC knowledge about LARC using the audiovisual method is 38.25. Based on this, audiovisual media is more effective than leaflet media. Test results Mann Whitney obtained a p-value of 0.000 and a significant level of significance $\alpha = 0.05$, with a significance level of ($p < 0.05$) meaning that there was a statistically significant difference between the two groups who received IEC using Audiovisual compared to those who used leaflets. The conclusion is that there is an increase in respondents' knowledge after receiving IEC, both using audiovisual and using leaflets, but in this study, the use of audiovisual was more effective in increasing respondents' knowledge. in understanding and using LARC as a safe and effective contraceptive method for RAC.

Keywords : IEC, audiovisual, leaflets, knowledge, contraception

1. Introduction

Reducing maternal mortality can be achieved through improving the maternal security pillar, where contraceptive and family planning services are the first pillar. The aim of using contraception is to fulfill everyone's reproductive rights, help plan when and how many children they want, and prevent unplanned pregnancies. The unmet need to date figure is still high, based on SIGA-YAN Family Planning data as of June 16 2023 is still high, namely at 12.97 percent. Meanwhile targets *unmet* amounting to 11.74 percent. Amount coverage of New Family Planning Participants (FP) (17.77%). Meanwhile, FP with the Long-Term Contraceptive Method (LARC) was (46.56%) and FP after childbirth or post-miscarriage was (52.83%). Demand for non-LARC contraceptives is still high.

Communication, Information and Education (IEC) is one of the important steps to support and make the public aware of the goals of Family Planning. Education is an important part of the counseling process. IEC can be grouped into 3 activities, the first is mass IEC, which is a process of communication, information and education (IEC) about family planning programs which can be carried out directly or indirectly to the public in large numbers. The second is group IEC, a IEC process that arises directly between IEC officers and a group (2-15) people, for example through group discussions, and the third is individual IEC, which is a form of IEC activity carried out by visiting the target individual of the IEC with the aim of being able to provide information about family planning programs in more detail, depth and on target.

Communication, Information and Education Media (IEC) can be provided in the form of Public Service Advertisements (PSAs) and other media which are not only included in the media category *below the line* (straight to the target) such as posters, leaflets, booklets, factsheets and stickers, but also categories *through the line* such as banners, roll-up banners and *above the line* (target audience) such as PSAs and magazines. There are also other media that have been created as IEC FP media such as books, videos, short films and songs. Contraceptive education aims to provide clients with the basic information they need to make informed decisions about contraceptive use and to use the contraceptive method they have chosen effectively including Long-Term Contraceptive Methods (LARC). According to research Fadhillah, Iin (2020), counseling using video media is more influential than counseling using only the lecture method on the level of knowledge and support of husbands about family planning among unmet needs.

2. Materials and methods

2.1 Materials

This research is a quantitative research with a research design *Quasy experiment design* with a plan *one group pretest posttest design* involving 60 RAC aged 30-49 years as samples. The research subjects were divided into 2, namely the group that was given intervention through audiovisual media, and the group that was given intervention through leaflet media without a control group. After the intervention was carried out, each group's knowledge was assessed regarding Long-Term Contraceptive Methods (LARC).

2.2 Procedure data collection

Sampling is done using technique *simple random sampling*. The criteria in this research are as follows: the inclusion criteria are RAC aged 30-49 years, can read and write, live together with their wife in Surabaya area, are the targets for providing LARC contraceptive IEC while the exclusion criteria are seasonal residents or non-permanent residents, have visual impairment and or hearing loss. The independent variables are leaflets and

audiovisuals and the dependent variable is knowledge about Long Term Contraceptive Methods (LARC). The research was conducted in the Surabaya area.

2.3 Data analysis

The analysis used in this research is a questionnaire and the test used is the independent t test or Mann Whitney test for data that is not normally distributed.

2.4 Research Ethics.

The research procedure received an ethical letter from the Brahmanda Lentera Chakra Institute Research Ethics Committee No.055/20/VII/EC/KEP/LCBL/2024

3. Results and Discussion

3.1 Results

Table 1. Table Distribution of respondents based on age, education, occupation, number of children, contraceptive methods currently used.

Respondent Characteristics	Number (n)	Percentage (%)
Age		
< 20 Years	-	-
20-35 Years	29	48,3
≥35 Years	31	51,7
Education		
Elementary (Elementary-Middle School)	10	16,7
Intermediate (High School)	43	71,7
High (D3–S1)	7	11,7
Work		
Not Working (IRT)	45	75,0
Employee	10	16,7
Self-employed	5	8,3
Number of children		
1	27	45,0
2	18	30,0
3	13	21,7
4	2	3,3
Contraceptive Methods		
Condom	18	30,0
Pil	14	23,3
Injection 1 month	3	5
Inject 3 months	6	10
IUD	13	21,7
Implant	4	6,7
MOW	2	3,3
Number of Respondents	60	100

Source: Primary Data 2024

Table 1 shows that the characteristics of the women in this study according to age showed that more than half (51.7%) were of healthy reproductive age. Based on educational history, the majority (70%) have secondary education. Based on work, the majority (73.4%) of women who were respondents did not work or were only housewives. Based on the type of contraception currently used, some (30%) use condoms and others (23.4%) use 3-month injection contraception.

Table 2. Distribution Effectiveness of Communication of Information and Education (IEC) through leaflet media in increasing knowledge of Childbearing Couples (RAC) about Long Term Contraceptive Methods (MJKP).

WHERE	Good	Enough	Not enough	Total
Pre-test	1 (3,3%)	5 (16,7%)	24 (80,0%)	30 (100%)
Post-Test	23 (76,7%)	6 (20,0%)	1 (3,3%)	30 (100%)

The table above shows that almost all of the RAC after the IEC intervention was carried out using leaflet media (76.7%) 23 respondents had good knowledge. The results of the analysis using the Wilcoxon test show that the respective results are $p \text{ value} = 0.000 < 0.05$ and the Z value $(-3,486) < Z (1.9)$ meaning that H_0 is rejected and H_1 is accepted so that there is a difference after the intervention of providing IEC with leaflet media. and audiovisual.

Table 3. Distribution The effectiveness of Information Communication and Education (IEC) through audiovisual media in increasing the knowledge of Childbearing Couples (RAC) about Long Term Contraception Methods (MJKP).

WHERE	Good	Enough	Not enough	Total
Pre-test	7 (23,3%)	5 (16,7%)	18 (60,0%)	30 (100%)
Post-Test	27 (90,0%)	3 (10,0%)	0 (0%)	30 (100%)

The table above shows that almost

all of the RAC after the intervention of providing IEC with audiovisual media (90.0%) had good knowledge. The results of the analysis using the Wilcoxon test show that the respective results are $p \text{ value} = 0.000 < 0.05$ and the Z value $(-3,486) < Z (1.9)$ meaning that H_0 is rejected and H_1 is accepted so that there is a difference after the intervention of providing IEC with leaflet media. and audiovisual.

Table 4. Effectiveness of leaflets and audiovisuals to increase knowledge about Long-Term Contraceptive Methods (LARC) in Childbearing Couples (RAC).

	N	Mean Rank	With hitung	<i>p-value</i>
Leaflet	30	22,75	-3.486	0,000
Audiovisual	30	38,25		

Based on the table above, it shows that the average RAC knowledge about LARC using the leaflet method is 22.75 and the average RAC knowledge about LARC using the audiovisual method is 38.25. Based on this, audiovisual media is more effective than leaflet media. The results of the Mann Whitney test obtained a p-value of 0.000 and a significant level of significance $\alpha = 0.05$. This means that the value of p is smaller than the significance level ($p < 0.05$), so H_0 is rejected, meaning that there is a difference after the intervention of providing IEC with leaflets and audiovisual media.

3.2 Discussion

Contraception is very important in planning a family and controlling birth. Long-Term Contraceptive Methods (LARC) are a popular choice for many couples want to manage their family safely and effectively. However, to optimize the use of LARC, adequate knowledge about the method is needed, especially for Women of Childbearing Age (WACA) who are the main target group.

The success of family planning programs is highly dependent on providing adequate information comprehensive and appropriate regarding long-term contraceptive methods. This information will help couples make choices that suit their circumstances. In addition, in-depth knowledge of the chosen method is also important to ensure correct and safe use, thereby increasing satisfaction and success of the family planning program. (Brahm et al., n.d.)

Efforts to increase WACA knowledge about LARC, Information Communication and Education (ICE) play a very important role. One effective ICE method is the use of leaflets and audiovisual media. Leaflet is printed material in the form of a brochure or pamphlet which contains important information about LARC, leaflet media has the advantage of being able to adapt to the independent learning community, people can see the contents more relaxed, information can be shared with family and neighbors, can provide details using pictures to strengthen the message, (Notoatmodjo, 2012) while audiovisual uses visual and audio media such as video or presentations to provide more interactive information.

The results of this research show that, after the intervention in providing ICE with leaflet media, almost all (76.7%) 23 respondents had good knowledge. The results of the analysis using the Wilcoxon test showed that the respective results were $p \text{ value} = 0.000 < 0.05$ and $Z \text{ value} (-3,486) < Z (1.9)$ means there is a significant difference in the form of increasing WACA knowledge between *pre-test* And *post-test* on media use *leaflet*.

Studies have shown that the use of leaflets and audiovisual media in ICE can significantly increase WACA understanding and knowledge about LARC. Several reasons why these media are effective in conveying information about long-term contraception to WACA include clear visualization. Leaflets that are concise and presented with a clear narrative can help WACA understand LARC concept better. Easy-to-understand information will help them make informed decisions regarding long-term contraceptive use. Leaflets can be distributed en masse allowing information to be presented visually in a clear and attractive manner.

Compared to just text, WACA can more easily understand the information conveyed through images and videos, so it can be said that the weakness of leaflets is that they only contain images or writing which are sometimes difficult for WACA to understand. This can cause differences in the information received. In line with research by Ayu, S. M., & Widayani (2022), Leaflets are useful for providing information to WACA regarding 4T and contraceptive methods to measure the effect of providing leaflets on respondents' knowledge and attitudes regarding family planning. After distributing the leaflets, it was found that there was an increase in knowledge, although it was not statistically significant ($p\text{-value}: 0.346$) and there was an increase in attitudes but it was not statistically significant ($p\text{-value}: 0.100$).

Compared to leaflets, audiovisual media has advantages in terms of interactivity and interest. Interesting

and informative videos can facilitate understanding and make RAC more interested in paying attention to and understanding information about LARC. Audiovisuals can be accessed via various platforms such as the internet or live presentations. This makes it easier for RAC to get information about LARC whenever they need it. The research results show almost all of the RAC after the intervention of providing IEC with audiovisual media (90.0%) had good knowledge. The results of the analysis using the Wilcoxon test showed that the respective results were $p\text{ value} = 0.000 < 0.05$ and $Z\text{ value } (-3,486) < Z (1.9)$, meaning that there was an increase in knowledge after the intervention of providing IEC with audiovisual media. These results are in line with research (Sirvana, I.H. et al., 2021) after carrying out statistical tests, namely *independent sample t-test* value obtained $p\text{-value} = 0.000$ ($P < 0.05$), meaning that there is a significant difference in the form of increasing RAC knowledge between *pre-test* And *post-test* on media use *audiovisual*.

Quoted from research by Fadhillah (2020), audiovisual media has two components, each of which has its own advantages, which together create great power. This media stimulates the senses of hearing and sight and maximizes the results achieved. This is possible because we have five senses that transmit most of our knowledge, around 75-87%, to the brain or eyes, while 13-25% of our knowledge is obtained or transmitted through other senses (Maulana, 2009).

By utilizing leaflets and audiovisual media in the IEC program regarding LARC, it is hoped that RAC' knowledge and understanding of long-term contraception can increase overall. It is hoped that this increase in knowledge can help RAC make the right decisions regarding the contraceptive methods they use, so that they can support better family planning. Therefore, it is important for related parties such as health workers and organizations involved in the IEC program to continue to develop and increase the use of leaflets and audiovisual media in conveying information about LARC to RAC. Thus, it is hoped that there will be a significant increase in the understanding and use of LARC as a safe and effective contraceptive method for RAC.

4. Conclusion

Based on the results of the research that has been carried out, it can be concluded that there is an increase in respondents' knowledge after receiving IEC, both using audiovisual and using leaflets, but in this study, the use of audiovisual more effective in increasing respondents' knowledge in understanding and using LARC as a safe and effective contraceptive method for RAC.

Confession

Prof. Dr. Ir. Achmad Jazidie, M.Eng, as Chancellor of Universitas Nahdlatul Ulama Surabaya. Khamida, S.Kep.Ns., M.Kep as Dean of the Faculty of Nursing and Midwifery, Universitas Nahdlatul Ulama Surabaya. Nanik Handayani., S.Kep. Ns., M.Kes as Head of the Midwife Professional Education Study Program. Achmad Syafiuddin, S.Si., M. Phil., PHD as Chair of the Research and Community Service Institution Universitas Nahdlatul Ulama Surabaya. UNUSA academic community and all respondents who participated in this research.

Conflict of interest

The authors declare no conflict of interest in this research

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