

# Development of the “SIMANIS” E-booklet as a Family Planning Decision-Making Tool for Women of Reproductive Age (WRA)

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## ABSTRACT

The height opportunity Pregnancy in Women of Reproductive Age (WRA) can cause teasing birth if no accompanied by planning a good family, though WRA participation in the family planning program is sufficient high, fulfillment need contraception and enhancement interest still become challenges. The lack of use sheet ABPK return by midwife in family planning counseling also strengthen need will be an interesting and easy educational media accessible in a way independent by WRA. Research this aim for develop sheet back to ABPK become e-booklet and testing its feasibility. Research and Development (R&D) method with the ADDIE model, consisting of five stages: 1) Analysis, 2) Design, 3) Development, 4) Implementation, 5) Evaluation. Subject study covering 22 WRA in the practice area independent midwife “S” Subdistrict Kedungkandang, Malang City, 2 lecturers as expert materials and media, and 1 midwife as expert. Instruments used in the form of guide interview, guide FGD (Focus Group Discussion), and questionnaire evaluation product. Data analyzed use approach quantitative and qualitative. Research results produce “SIMANIS” e-booklet (Informasi Metode dan Alat Kontrasepsi Minimalis) designed interesting, using image, language simple, and features voice for make it easier understanding independently by WRA. Validation results show this media is in the “very worthy” category with evaluation expert 93% material, 100% media expert, and trial results group small show that 87% of participants give rating “very worthy”. With Thus, the “SIMANIS” e-booklet is very worthy. used as tool help taking decision family planning in WRA.

**Keywords :** ABPK flip chart ; “SIMANIS” e-booklet ; ADDIE.

## INTRODUCTION

The height opportunity Pregnancy in Women of Reproductive Age (WRA) can cause explosion amount birth (*baby boom*) if family no do planning with good. Planning pregnancy in family important done because 90% of WRA will become pregnant If they do connection regular sexual intercourse in one year<sup>1</sup>. To anticipate this, the government is working to slow population growth through the family planning program. Although the number of WRA participating in the program is quite high, the challenge of meeting contraceptive needs and increasing their interest remains a concern<sup>2</sup>.

One of the government's efforts to improve access and quality of contraceptive services is by increasing public awareness and awareness of fertile couples regarding the importance of pregnancy planning, through increased communication, information, education and counseling<sup>3</sup>. So far, the implementation of the family planning counseling process has been carried out using ABPK (Alat Bantu Pengambilan Keputusan Ber-KB), namely an interactive flip chart used as a work aid for service providers (doctors or midwives) in helping clients choose and use family planning methods<sup>4</sup>. However, the use of ABPK by midwives is still relatively low<sup>5,6</sup>.

This is in line with the research findings of Weva Rahmadana which stated that one of the obstacles in implementing the postpartum family planning program in the Kedungkandang Community Health Center area, Malang City, was that not all informants received family planning counseling using ABPK<sup>7</sup>. The low use of ABPK is caused by several obstacles such as the size of ABPK being quite large and heavy, explanations that are too detailed about the benefits of contraceptives without direct guidance, and prospective family planning acceptors needing a long time to schedule a consultation visit with a midwife or service provider<sup>8,9</sup>. In line with Asnel's (2025) research, ABPK flip charts are less effective than booklets because they require further explanation by health workers. Furthermore, the use of ABPK flip charts is considered less interactive during counseling<sup>10</sup>. Based on the results of a preliminary study at the independent practice of midwife “S” in Kedungkandang District, Malang City in November 2024, it was shown that, in family planning counseling services, midwives have been using ABPK as a counseling medium. However, in its implementation, women of childbearing age still do not understand the material presented, such as material on IUD contraception, implants, and myths circulating in the community. This causes the majority of women of childbearing age to still experience confusion in determining which contraceptive method to use<sup>11</sup>.

To overcome this problem, various studies have been conducted to develop ABPK return sheets, this research developed ABPK return sheets in the form of an android application<sup>5,6</sup>. The application is designed as an interactive digital tool for healthcare professionals, such as doctors and midwives, to assist clients in making informed decisions about contraceptive methods. However, the application's appearance still resembles a conventional ABPK flip chart, making the images and language less appealing for independent use by women with reproductive health issues WRA. Its use is limited because it is intended for service providers only. Access to its use is not yet widespread because the application can only be installed on android and computers. Therefore,

it is necessary to develop media that is more attractive and can be accessed independently by WRA to increase their knowledge regarding family planning methods and contraceptive tools<sup>12</sup>. The use of media in health education for women of productive age can further increase their knowledge and ability to understand and choose the right contraceptive method<sup>11</sup>.

Along with the development of technology, where almost everyone has access to smartphones, information technology-based health education media can now be developed in digital form<sup>13,14</sup>. Digital media can increase the effectiveness and efficiency of time, support distance learning, and be more practical to use<sup>12</sup>. The use of digital media, such as online platforms and mobile apps, has been used as a medium for health education. In Indonesia, online platforms like Instagram and TikTok disseminate the latest information very quickly. However, information based on social media and digital interventions makes it more difficult to fully control what is read, requiring self-filtering of such information<sup>15</sup>. Information available in digital publications or electronic media can be a solution, because the information available is specific to the purpose of each publication.

One innovation that can be utilized is the e-booklet, which is a booklet modified into electronic form<sup>16</sup>. E-booklets have the potential to be developed in a more interactive way than brochures or printed books. For example, e-booklets can be equipped with video tutorials, infographics, animations, or even direct links to additional sources of information, making it easier for readers to understand the content. This visual presentation is also more engaging for those who are less accustomed to reading long texts. Disseminating information through e-booklets is more effective in reaching a wider target audience. E-booklets also make it easier for readers to access information independently<sup>17</sup>. In the future, WRA will be able to download the e-booklet and read it at any time, without having to wait for a direct educational session which is often limited by time and place.

The use of e-booklet media in family planning counseling is considered to have an impact on increasing the knowledge and attitudes of prospective brides and grooms about family planning at the Kepanjen Community Health Center, Malang Regency<sup>18</sup>. In addition, other research reveals that health workers are expected to utilize e-booklets as a health promotion medium because they are more effective than flip charts in increasing knowledge and changing women's attitudes<sup>19</sup>. Previous research on the development of ABPK flip charts differs from this study, as the target audience for that media development was healthcare providers as a counseling tool. Meanwhile, this study developed an e-booklet as a medium that can be used independently by WRA. Therefore, the material, language, and illustrations in the e-booklet were adapted to the needs of women of productive age to make it more engaging and interactive, with additional audio explanations for each topic. Based on this background, this study aims to develop and analyze the feasibility of e-booklets as an effort to assist family planning decision-making among WRA.

## MATERIALS AND METHODS

This study uses method Research and Development (R&D) with the aim of developing ABPK flip chart media in the form of e-booklet. The development model used as a reference adapts the steps *Dick and Carey* (1996), namely the ADDIE model which consists of five stages: 1) Analysis, 2) Design, 3) Development, 4) Implementation, 5) Evaluation. The research subjects involved 25 respondents who were adjusted at the research stage. The research subjects were grouped based on the stages of the research. Analysis stage adapted from Yulifah's research (2023), includes a standard media evaluation process, needs analysis, and FGD (Focus Group Discussion)<sup>20</sup>. At in the analysis stage, 7 WRA are needed as interview sources to analyze the needs of WRA for the use of ABPK return sheets and FGD participants, as well as one midwife as the owner of an independent practice midwife as an expert in FGD activities. The design stage does not require a subject, but is focused on the design and arrangement of the media components to be developed. Furthermore, at the development stage, a validity test was carried out by experts, for this stage the validity test was carried out by involving two lecturers from the Malang Ministry of Health Polytechnic, namely lecturers from the Department of Midwifery as material experts who have experience in the field of obstetrics care, family planning and reproductive health, as well as lecturers from the Department of Health Promotion as media experts who have competence and experience in the field of media and health promotion. Based on the results of the validity test, the researcher revised the media according to the suggestions and inputs provided by experts. After revision, the implementation stage is carried out through a trial in small groups to assess the feasibility of the media, by involving 15 WRA in the work area of independent practice for midwife "S" Kedungkandang District, Malang City as media users. WRA determination using the purposive sampling based on inclusion criteria such as voluntary willingness as a respondent, WRA is 20-29 years old, and can operate smartphone, by paying attention to Range the number of FGD participants amounted to 6-10 WRA according to *Brick and Green*, while small group trials of 10-15 WRA according to *Dick and Carey*. The research instruments used were interview guides, FGD guides, and product assessment questionnaires. The product assessment questionnaire to measure media validity was adapted from research conducted by Esti Maharani Putri in 2022 with the research title "Pengembangan Media Buku Saku "Apa Itu Menstruasi (UNICEF)".

Data analysis techniques use quantitative and qualitative approaches, quantitative data analysis is obtained through the number of product assessment questionnaire assessment scores, total assessment scores are calculated using the formula:

$$\text{Percentage} = \frac{\text{Total data collection score}}{\text{Highest score}} \times 100\%$$

The results of the assessment score are then classified to determine the eligibility of the e-booklet. The classification of media feasibility scores is categorized into five assessment criteria.

Table 1. Media Eligibility Classification Scale

Percentage Score %	Classification	Information
81%-100%	Very worthy	No Revision
61%-80%	Worthy	No Revision
41%-60%	Quite decent	Revision Needed
21%-40%	Not worthy	Revision
0%-20%	Not feasible	Revision

Based on Table 1, the e-booklet assessment ends when the percentage score meets the eligibility classification in the very worthy and worthy category, which indicates that the e-booklet has been appropriate in terms of material, media, and usage assessment. If the percentage score results are below this classification, then it is necessary to revise the media.

Furthermore, qualitative data analysis refers to input in the form of improvements and suggestions provided by experts as a basis for assessing the level of feasibility and making improvements to the developed product. Prior to the study, the researcher had obtained approval from the Health Research Ethics Commission of the Malang Ministry of Health Polytechnic with the result "Ethically Feasible" which was determined on May 16, 2025, as evidenced by the ethical clearance letter number DP.04.03/F.XXI.30/00289/2025.

## RESULT

### Subject Characteristics

The characteristics of WRA participants as resource persons in the needs analysis process are the same as in the FGD process. The selection of the same participants at the needs analysis stage is carried out to deepen the information that has been obtained in the previous stage so that the results of the FGD stage are expected to be more relevant to the developed media.

Table 2. Characteristics of WRA Participants in Needs Analysis and FGD Based on Age, Last Education, and Occupation, at at Independent Practice for Midwife "S", Kedungkandang District, Malang City

No	Characteristics of Needs Analysis and FGD Participants	Parameters	Sum (Σ)	Percentage (%)
1	Age	20-29 years old	7	100
2	Final Education	Elementary School	2	29
		High School/Vocational School	5	71
3	Work	Not working	7	100
		Total	7	100

Based on Table 2, it shows the age of all participants in the needs analysis and FGD are 20-29 years old (100%), meaning that participants are included in the productive age category. WRA education is dominated by 5 high school/vocational school graduates (71%) and based on their work, all participants are not working (100%).

Table 3. Characteristics of Midwives as FGD Participant Experts Based on Age, Last Education, Length of Work at Independent Practice for Midwife "S", Kedungkandang District, Malang City

No	Characteristics of FGD Experts	Description
1	Age	45 years
2	Last education	Bachelor of applied midwifery
3	Long working time	25 years

Based on Table 3, it shows that midwives have the appropriate educational background and adequate work experience so that they are able to provide an overview of the development of the ABPK return sheet.

Table 4. Characteristics of Lecturers as Material and Media Experts Based on Age, Gender, Last Education, Field of Expertise, and Length of Employment

No	Characteristics of Expert Validation	Material Expert	Media Member
1	Age	46 years old	44 years old
2	Gender	Woman	Man
3	Final education	Magister	Magister
4	Areas of expertise	Reproductive Health and Family Planning	Health Promotion Media
5	Long working time	20 years	10 years

Based on Table 3, it shows that both experts have relevant educational backgrounds and work experience, so they are considered competent in assessing the feasibility of the content and media developed.

Table 5. Characteristics of WRA Small Group Trial Participants Based on Age, Last Education, and Occupation, at Independent Practice for Midwife "S", Kedungkandang District, Malang City

No	Characteristics of Small Group Trial Participants	Parameters	Sum ( $\Sigma$ )	Percentage (%)
1	Age	20-29 years old	15	100
2	Final education	Elementary School	2	13
		Junior High School	3	20
		High School/Vocational School	10	67
3	Work	Work	2	13
		Not working	13	87
		Total	15	100

Based on Table 5, it shows the age of all participants in the small group trial of 20-29 years old (100%), meaning that participants are included in the productive age category. WRA education is dominated by 10 high school/vocational school graduates (67%) and based on their work, the majority of participants are not working as many as 13 people (87%).

## Analysis

The analysis stage is carried out by evaluating standard media, analyzing the needs of WRA on the use of ABPK flip chart, and FGD (Focus Group Discussion).

Table 6. Results of the Evaluation of the ABPK Flip chart as a Decision-Making Tool with Family Planning

ABPK Standard	Information	Category
1. Use the default format	No one has yet presented text, image, and sound in digital format	Enough to meet the standards
2. Content according to client requirements	The material information is spread over three sections, the first is marked by a tab on the right side consisting of the opening tab, the new client tab, the double protection information tab, the client tab with special needs, and the repeat client tab. The second section on the bottom left side contains the type of contraceptive method, and the third part on the bottom right side is the additional information tab (checklist, comparison of the effectiveness of contraceptive methods, facts about STIs and HIV/AIDS, women's reproductive system, and menstrual cycles)	
3. Design	The dominant image color is black and white, there are tabs on the right and bottom sides with different colors	
4. Algorithm	Midwives or health workers ask and explain one by one according to the client's needs	
5. Accessibility	Co-use with healthcare workers	
6. Current and new	ABPK has not been updated	

Based on Table 6, it shows that the use of ABPK flip chart is quite in accordance with the standard. However, it has not fully encouraged active participation in the decision-making process. The information presented has not been organized in a unified manner on a single page per method, so the client needs to be guided continuously.

Table 7. Results of the Needs Assessment for WRA Participants Independent Practice for Midwife "S"

No	ABPK Standard	Results of the Needs Assessment
1.	Format	As many as 86% of participants considered that the ABPK return sheet was too large and impractical to use during counseling.
3.	Content	As many as 57% of participants considered the ABPK flip chart material not easy to understand when read, then 57% of participants considered the information to be not helpful in understanding the choice of family planning, and 86% of participants considered the use of language too formal so that it was difficult to understand.
2.	Design	57% stated that the design (color, image, layout) of ordinary ABPK flip chart was unattractive and 43% considered it less supportive of understanding
4.	Algorithm	As many as 57% of participants stated that the information was submitted not sequentially and had not been guided to choose the family planning method, and 86% of participants felt that they had been directed to choose the family planning method according to their personal conditions
5.	Accessibility	As many as 71% of participants felt that they could not understand the contents of the ABPK return sheet without explanation from a midwife or health worker and 86% of participants considered that the ABPK return sheet was not easy to use for everyone.

Based on Table 7, the results of the needs analysis show that the ABPK return sheet requires development, especially in the aspects of format, language, design, information delivery algorithms, and access to ease of use of media that can be used independently by WRA in the decision-making process with family planning. These results were obtained based on tabulation and analysis on interviews of 7 participants.

Table 8. Results of the FGD on ABPK Evaluation by Independent Practice Participants of Midwife "S"

No	Strategy Issues	Cause	FGD Results	Researcher Study
1.	Format	The format is still print media	There is a need for new media involving WRA with a digital media format equipped with voice explanations and comfortable to use	Media can be developed in an interactive digital format that allows WRA to access independently
2.	Content	The material information is spread in 3 parts so it is necessary to flip through and confuse	The material is developed using linear flow (chapter 1 → chapter 2 → chapter 3), concise, and using simple language as required by WRA	Media needs to be adjusted to the needs of WRA so that it can improve understanding when used independently by WRA
3.	Design	Lack of understanding of the material	Each explanation includes attractive images and colors to clarify the content of the material	Media needs to be designed with an attractive color combination and contextual illustrations to be more communicative
4.	Algorithm	Not yet fully engaging the WRA, the flow does not drive systematically	WRA needs to be involved, it would be better if the media could be read and used independently with an easy-to-follow flow	Media needs to be developed with a systematic flow of information and support decision-making
5.	Accessibility	Can only be used with midwives or health workers	WRA has difficulty understanding the content of media without guidance and the use can be accessed anytime and anywhere	Media is designed to be easily accessible to unaccompanied WRA, with simple navigation, instructions, and flexibility



Based on Table 8, the results of the FGD show that participants agree that if the ABPK flip chart is developed, the media is developed in a digital media format with additional voices so that it can be used flexibly, the media is made using linear materials (Chapter 1 → Chapter 2 → Chapter 3) and the use of simple language, the media is developed with attractive images and colors in each explanation to clarify the content of the material, and the media is developed in the form of an interactive digital reading book with illustrative images and concise information that can be accessed anytime and anywhere.

Table 9. Findings at the Analysis Stage

No	ABPK Return Sheet	Standards of the Ministry of Health of the Republic of Indonesia	Developed media
1.	Media formats	The format is standard	Using an interactive digital reading book in the form of <i>an</i> e-booklet containing information on contraceptive methods and tools
2.	ABPK Content	<ul style="list-style-type: none"> <li>- The content is branched out and choice-based</li> <li>- Contains the material in the section 2 tab</li> <li>- Content explained by the language of the midwife or health worker</li> <li>- There are two sides of the material, one side of the material facing the WRA, and the other side facing the midwife to explain the material</li> </ul>	<ul style="list-style-type: none"> <li>- The content is developed and arranged in a linear manner that is easy to use independently by WRA</li> <li>- Communicative language</li> <li>- Contains material divided into 3 chapters and notes</li> <li>- There is one side of the material and additional voice features that explain the material on each page</li> </ul>
3.	Design	<ul style="list-style-type: none"> <li>- The navigation design used is in the form of tabs</li> <li>- Vector image in black and white (monotonous)</li> <li>- Backgrounds are differentiated by tab color</li> </ul>	<ul style="list-style-type: none"> <li>- The navigation design used is a table of contents, chapter icons, and quick pages</li> <li>- Color vector image</li> <li>- Background colors are equalized with harmonious color combinations</li> </ul>
4.	Algorithm	<ul style="list-style-type: none"> <li>- Ask WRA what it needs on the "welcome" tab in the first section</li> <li>- Midwives flip tabs according to client requirements</li> <li>- The midwife explained the method and type of contraception that is appropriate for the WRA condition</li> <li>- Family planning decisions are up to the client</li> </ul>	<ul style="list-style-type: none"> <li>- WRA opens media links</li> <li>- WRA can choose the use of media can be adjusted to the desire to read on its own, just listen, and read while listening</li> <li>- Information can be accessed according to WRA's wishes and used as WRA information and records before the visit to the midwife</li> </ul>
5.	Accessibility	Used with midwives or healthcare workers	WRA is fully involved in using the e-booklet, WRA can use it independently

Based on Table 9, it shows that these findings can be used for the development of ABPK flip chart in the form of e-booklet which can be used by both midwives, service providers, and WRA.

### Design

Media planning process e-booklet It is carried out through three stages. The first stage begins with creating storyboard that is advance planning that contains a rough sketch or overview of the page flow, order of content and material structure e-booklet. Storyboard it serves to visualize the content of the media before the design process is carried out. Furthermore, the second stage in the design process, e-booklet created using the Canva and CorelDRAW apps. At this stage, the researcher determines the page layout, choose an attractive background color, determine typeface and font size that is easy to read, as well as adding images, icons, and vectors to clarify the content of the material. In addition, to add to the attractiveness and at the same time provide the characteristics of the media, then e-booklet This is named "SIMANIS" (Informasi Metode dan Alat Kontrasepsi Minimalis). Here are some design looks "SIMANIS" e-booklet.



Picture 1. Design E-booklet "SIMANIS"

In the third stage, the researcher made an audio recording as a voice actor on the media "SIMANIS" e-booklet. Recording is done using the voice recorder feature on smartphone, with the content of the explanation in accordance with the material contained in the "SIMANIS" e-booklet.

### Development

At the development step, the design results e-booklet in PDF form along with sound recordings uploaded on a digital platform, namely the FlipHTML5 application and disseminated by sharing links <https://online.fliphtml5.com/vtlap/axxn/>. FlipHTML5 is a digital publishing application that allows users to convert PDF files into e-booklet interactive and supports the addition of multimedia elements such as audio, links, and animations.

The following is the appearance of the e-booklet on the user's laptop and smartphone screens.



Picture 2. Display "SIMANIS" E-booklet on the Laptop Screen and Smartphone

Media e-booklet that has been developed is then validated by material experts and media experts to assess the feasibility of media content and display. The validation process was carried out using a questionnaire prepared according to the eligibility assessment indicators.

Table 10. Validity Test Results by Subject Matter Experts

No.	Statement	Value
<b>Material Feasibility Aspects</b>		
1.	Conciseness and clarity of material content	
a.	Completeness of the definition of family planning material	4
b.	Completeness of the purpose and benefits of family planning materials	4
c.	Completeness of each information material about family planning contraceptive methods	3
d.	Completeness of the effectiveness of birth control contraceptive methods and tools	3
2.	Systematic presentation	4
3.	Easy to understand	4
4.	Spelling consistency	4
<b>Language Eligibility Aspects</b>		

No.	Statement	Value
5.	Language is easy to understand	3
6.	Easy-to-read text	4
Image selection		
7.	Selection of eye-catching images	4
8.	Compatibility of the image with the material	4
Total value		41
Percentage Score		93%
Product Eligibility Criteria		Very worthy (No revision)

Repair:

The first chapter on the definition, benefits, and purpose of family planning is given a reference and accompanying year, tidying up the AKDR material, the requirements for using pills are rechecked in accordance with the ABPK, pay attention to the material on injections for 1 and 3 months according to the ABPK, the vasectomy method is placed at the end of the material and then the caption "alternative contraception for couples" is added, improving the use of sentences in the myth or fact section of the vasectomy method, Check again the effectiveness of contraceptive methods in ABPK.

Based on Table 10, the assessment of the material in "SIMANIS" e-booklet obtained a score of 41 with a percentage of 93% which is included in the very worthy category, but there are still suggestions for improvement from material experts.

Table 11. Product Validity Results by Media Experts

No	Statement	Value
Ease and simplicity of design		
1.	Ease of use of e-booklets	4
2.	Simplicity of e-booklet design	4
3.	Clarity to read e-booklet	4
Aspect of Display		
4.	Attractive e-booklet cover	4
5.	Composition and layout of the writing on the cover	4
6.	The composition of the letters in the title is interesting and easy to read	4
7.	Color composition on the cover	4
8.	Typefaces used in e-booklet media	4
9.	Font size used in e-booklets	4
10.	The color of the writing used in the e-booklet	4
11.	Clarity of the writing used in the e-booklet	4
12.	Background colors used on e-booklet media	4
13.	Placement of the appearance of the writing in the e-booklet media	4
14.	Images can support the understanding of the material	4
15.	The images used are of high quality	4
16.	The sound displayed in the media is in accordance with the content of the material	4
17.	Background sound in the media adds to the interest	4
Learning Aspects		
18.	Media relevant to the material	4
19.	Clarity of media usage indicators	4
20.	Reusable media and alternative learning media	4
Total Value		80
Percentage Score		100%
Product Eligibility Criteria		Very worthy (No revision)

Repair:

It's appropriate and add some parts that are not neat, it's okay in terms of content and design



Based on Table 11, the assessment of the "SIMANIS" e-booklet media obtained a score of 80 with a percentage of 100% which is included in the very worthy category, but there are still suggestions for improvement from media experts.

### Implementation

After improvement, then at the implementation stage the media was tested in a limited group or small group trial involving 15 WRA participants who had been determined based on sample calculations. All participants came from the independent practice for midwife "S" area, Kedungkandang District, Malang City. The small group trial will be held on May 17, 2025 in the independent practice for midwife "S" hall. In its implementation, each participant was given 30 minutes to use and observe "SIMANIS" e-booklet, then continued with the researcher interviews with participants to fill out a media feasibility assessment questionnaire. The purpose of this small group trial is to find out the user response to the developed media and identify the advantages and disadvantages as well as the feasibility of the product.

### Evaluation

In this study, the results of the evaluation were obtained from the media feasibility test "SIMANIS" e-booklet that has been tested to WRA with a limited number or small group trials.

Table 12. Results of Product Feasibility Assessment in Small Group Trials by WRA at Independent Practice of Midwife "S", Kedungkandang District, Malang City

No	Classification	Sum	Information
1.	Very worthy	13	87%
2.	Worthy	2	13%
	Total	15	100%

Based on Table 12, out of a total of 15 small group trial participants, as many as 13 participants (87%) provide ratings very worthy. While 2 participants (13%) Provide ratings worthy.

## DISCUSSION

### Developing "SIMANIS" E-booklet as a Decision-Making Tool for Family Planning at WRA

Media development e-booklet This stems from the non-optimal use of the 2018 ABPK return sheet by midwives in petrifying family planning decision-making and the high chance of pregnancy in productive age WRA which can cause an explosion in the number of births (baby boom) if they do not plan well. For this reason, it is necessary to develop media that is in accordance with the needs of WRA. The research uses the Research and Development (R&D) with the ADDIE model. In the initial step of development, the researcher conducts an analysis consisting of three stages, namely: standard media evaluation, need assessment, and FGD. The evaluation of standard media was carried out through a literature study to determine the standards for the use of ABPK return sheets owned by the Ministry of Health of the Republic of Indonesia and BKKBN in 2018 in books, journals, and standard media. From the results of the standard media evaluation, it was found that the use of the ABPK flip chart is still one-way, with the standard format and content spread across three parts, the dominant color is black and white, and navigation is done through tabs on the right and bottom sides. The algorithm relies on midwives who guide in succession, so WRA cannot access this media independently. The information is not organized by method in one page, so the client needs to be continuously guided and not actively involved in decision-making. The results of the standard media evaluation are used as the basis for designing interview questions at the need assessment stage. Need assessment was used to find out the needs that were in accordance with the target, the need assessment was carried out through interviews with seven WRA in the independent practice for midwife "S" area, Kedungkandang District, Malang City, the results were found that the use of the ABPK return sheet was too large and impractical to be used during counseling, the material on the return sheet was difficult to understand when read because the language used was too formal so that the information obtained was not helpful in understanding the selection of methods Contraceptives. The design of the flip chart, both colors, images, and ordinary layouts, is not attractive so it does not support understanding. The algorithm for using flip chart has not been presented sequentially. Access to the use of flip chart is considered to be used together with midwives or health workers because it is not easy to use alone for everyone. This shows that ABPK return sheet media requires development, especially in the aspects of format, language, design, information delivery algorithms, as well as access to ease of use of media that can be used independently by WRA in assisting the family planning decision-making process. The results of the need assessment stage are then used as the basis for compiling discussion guidelines at the FGD stage. In implementation FGD (Focus Group Discussion), A number of inputs were obtained related to the form and structure of media development, namely: participants agreed that if the ABPK return sheet was developed, the media was developed in a digital media format with additional voices so that it could be used and flexible, the media was made using linear materials and simple language, the media was developed with attractive images and

colors in each explanation to clarify the content of the material. Based on the overall results of the analysis in the process of developing the ABPK return sheet, the findings were obtained that became the basis for the development of the ABPK return sheet in the form of an e-booklet. This type of media was chosen because it has an attractive, practical, and accessible visualization appeal from various devices without any space and time limitations. These findings are in line with the literature that states that health services through digital media have succeeded in improving the operational efficiency of "posyandu" and expanding the range of services<sup>21</sup>. In addition, the use of health digital media has a significant influence on public health<sup>22,23</sup>.

To increase the attractiveness and ease of understanding, digital media is developed with an attractive appearance, equipped with illustrative images, and audio as a support for the delivery of the material, which is packaged in the form of e-booklet interactive with simple and communicative language, making it easier for WRA to understand information from various educational backgrounds. In the process of designing media development, researchers use three stages, namely, creating storyboard as a rough sketch of the flow of the page, the order of the content, and the structure of the material. Furthermore, in the design process, the researcher uses an application Canva and CorelDRAW as a tool in creating visual media displays. At this stage, the naming of "SIMANIS" in e-booklet designed as an increase in attractiveness as well as a characteristic of the media. The next stage is the process of making audio which is carried out by making recordings according to the material in the e-booklet. This is in accordance with the opinion of Eliana (2022) who states that e-booklet can be used as a learning medium that is considered practical because it is easy to carry anywhere and anytime, and has a concise material content, easy to understand, easy to reproduce, and has a longer durability<sup>24</sup>. In addition, its use in health education has been proven to be an effective means of transferring information, so that users can directly experience the benefits of the interventions provided<sup>25</sup>.

In the development step, the researcher incorporated the design e-booklet in the form of PDF and audio on a digital platform (FlipHTML5) which makes the "SIMANIS" e-booklet not only present visual elements in the form of text and images, but also equipped with sound components. With the support of this element, users are expected to more easily understand the content of the material and be interested in learning it. This is in line with Tamsil's (2023) research that types of audio-visual media such as Instagram equipped with images and colors can attract the attention of educational targets<sup>14</sup>. The same thing was expressed by Alini and Indrawati (2018) in Batjo (2021) that the ability of audio-visual media in health promotion is better and more attracts attention because it provides stimulus to hearing and vision at the same time, so that the results obtained are maximized<sup>26</sup>. Dewianti's research (2025) states that the use of audio-visual media can be used to increase knowledge and as a non-pharmacological therapy<sup>27</sup>. However, there is a lack of use of audio visuals as an educational medium, referring to the cone of experience *Edgar Dale*, user memory of learning using this media only reaches 30%. This shows that although audio-visual media is more effective than audio media alone, there are still challenges in ensuring that users actually absorb and remember the information conveyed<sup>28</sup>. To overcome this, the audio-visual media in this study is not presented at the same time, but is designed so that users can access e-booklet flexibly, that is, by reading, listening, or reading while listening repeatedly to certain parts that are considered important, so that the information obtained is maximized. This finding is also in line with the opinion of Aisyah (2025) who states that audio-visual media can play a role like a teacher in several situations<sup>29</sup>.

The development of the "SIMANIS" e-booklet can increase knowledge, shape attitudes and awareness. Furthermore, these attitudes and awareness will form behavior<sup>30,31</sup>. Thus, increasing WRA knowledge can affect WRA decision-making and behavior in family planning. This is in line with Fitriyawati's statement which states that the media is said to be ideal if the media is interesting, easy to understand, and in accordance with the development of the times<sup>32</sup>.

### **Identifying the Feasibility of "SIMANIS" E-booklets as a Decision-Making Tool for Family Planning in WRA**

Media eligibility "SIMANIS" e-booklet is assessed through an expert validation process and a small group trial. The expert validation process is carried out at the implementation stage by involving two validators, namely material experts and media experts. Based on the results of the assessment from the material experts, "SIMANIS" e-booklet obtained a feasibility percentage of 93% in the very worthy category. Although the overall content of the material is considered good, the subject matter expert still provides a number of important inputs for improving the content of the material. The validation data is used to assess the quality of the media as well as the basis for determining whether revisions are necessary<sup>33</sup>. Furthermore, the results of the validation of media experts obtained a percentage of 100% with a very worthy category. Although the overall content and design are considered good, media experts still provide input to improve the appearance in some parts to make it neater<sup>33</sup>. Although the overall content and design are considered good, media experts still provide input to improve the appearance in some parts to make it neater<sup>33</sup>. After a feasibility assessment by an expert validator, the researcher revised the material and media design "SIMANIS" e-booklet by paying attention to the input and suggestions provided by expert validators before the small group trial stage.

Small group trials enter the evaluation stage. The results of the trial in a small group showed that out of 15 total assessments, as many as 13 participants (87%) stated that the media is very worthy for use. Based on the results of the media feasibility assessment, it can be concluded that "SIMANIS" e-booklet is very suitable to be used as a decision-making tool for family planning at WRA. In line with the research of Riefani and Mahrudin (2023) in Fitriani (2023) stating that product validation plays an important role in identifying product weaknesses or shortcomings, revisions are made based on the inputs obtained during validation activities, which aim to improve and finalize. A perfect product can be achieved by improving and considering the results along with the suggestions of validators<sup>16</sup>. Even though "SIMANIS" e-booklet is considered very suitable for use, there are still drawbacks in its use. Some of them are necessary smartphones to access e-booklet, requires internet quota, and audio playback on e-booklet that have not adjusted every part of the page. As a result, when a user selects a particular page, the audio that appears does not always match the content of the page that is being opened or used.

Several previous studies have been conducted to develop ABPK return sheets, in previous research development led to the use of applications, including research conducted by Nurcahyani (2022) who developed ABPK return sheets into the form of android-based applications, the results of the feasibility test of the application of family planning decision-making tools according to material experts obtained a feasibility value of 81.3% which is included in the category of very worthy to use as a family planning counseling medium<sup>5</sup>. Further research conducted by Widyana (2022) stated that the results of the study showed that the "ABPK family planning" application developed was considered good and suitable for use as a counseling medium with a score of 86%<sup>6</sup>. The research on the development of the ABPK return sheet that has been mentioned is different from this study, because the development is in the form of an android application that is used as a medium for health care providers in helping to provide education to WRA, the material is similar to the conventional ABPK return sheet, it has not been equipped with explanatory audio and limited access to android devices and computers only, while in this study an interactive e-booklet is used as an interactive e-booklet as The development of conventional media with an attractive appearance, equipped with illustrative images, audio to support the delivery of materials, and materials that are tailored to the needs of users.

## CONCLUSION AND RECOMMENDATIONS

Based on the results of the research and development that has been carried out, the first conclusion is obtained that the development of the "SIMANIS" e-booklet refers to the ADDIE model which consists of the Analysis, Design, Development, Implementation, and Evaluation stages. The second conclusion is that the results of the feasibility test involving expert assessments and small group trials show that the "SIMANIS" e-booklet has a very worthy quality of content and appearance, so that it can be used as a supporting media in the family planning counseling process. These findings indicate that digital-based media such as e-booklets are able to help the decision-making process with family planning independently and in an informed manner at WRA. Thus, the development of the "SIMANIS" e-booklet has the potential to make a real contribution to improving the quality of family planning counseling services that are more innovative and effective.

Suggestions for WRA as users, it is hoped that the "SIMANIS" e-booklet can be used as information material for learning media, while for service providers such as doctors and midwives, it is hoped that it can help spread the use of media. For the next researcher, it is hoped that they can improve the "SIMANIS" e-booklet and conduct effectiveness tests and applications on a wider scale, so that they can obtain more optimal results.

## AUTHOR'S CONTRIBUTION STATEMENT

Salsabila Balqis: Conceptualization, Methodology, Software, Validation, Formal Analysis, Investigation, Resources, Data Curation, Original Draft Writing-Preparation, Writing-Review and Editing, Visualization, Supervision, Project Administration, Funding Acquisition. Rita Yulifah: Conceptualization, Validation, Writing-Preparation of the Original Draft, Writing-Review and Editing. Lisa Purbawaning: Conceptualization, Validation, Writing-Preparation of the Original Draft.

## CONFLICT OF INTEREST

The authors declare that the research was conducted without any commercial or financial relationships that could be construed as a potential conflict of interest

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