

DEVELOPMENT OF ONLINE BOOKLETS AS HERBAL EARNING MEDIA IN HEALTH CARE FOR BREASTFEEDING MOTHERS

Pengembangan Booklet Online sebagai Media Belajar Herbal pada Perawatan Kesehatan Ibu Menyusui

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ABSTRAK

Indonesia kaya akan tanaman herbal untuk menjaga kesehatan selama masa menyusui, namun pengetahuan ibu muda mengenai hal tersebut masih rendah. Booklet online dapat digunakan oleh ibu menyusui untuk menambah pengetahuan tentang herbal. Pengembangan booklet online penting untuk memberikan media pembelajaran dalam kegiatan promosi kesehatan. Penelitian ini bertujuan membuat booklet herbal online serta menguji validitas, efektivitas dan kelayakannya untuk meningkatkan pengetahuan tentang kegunaan herbal bagi ibu menyusui dalam menjaga kesehatan. Penelitian ini merupakan *research and development*. Isi booklet disusun melalui studi literatur. Booklet ini dirancang oleh tim peneliti, divalidasi oleh para ahli, dan diuji pada responden skala kecil. Validasi Aiken diakses oleh tiga orang ahli materi, dua orang ahli bahasa, dan empat orang ahli desain. Teknik *purposive sampling* dilakukan untuk memilih tiga puluh (30) ibu menyusui dari Desa Beku, Karanganyar, Klaten, yang mengikuti uji coba booklet online di Poltekkes Kemenkes Surakarta sebagai responden. Uji coba dilakukan untuk menguji efektivitas booklet online dalam meningkatkan pengetahuan dan uji kelayakan. Banyak revisi yang harus dilakukan terhadap booklet online sebelum diujikan kepada responden. Validasi Aiken terhadap booklet online adalah valid (skor V Aiken = 0,874). Booklet online dapat meningkatkan pengetahuan responden tentang herbal, dengan selisih rata-rata pre-test dan post-test sebesar 7,5 (SD = 10,9) dan $p\text{-value} = 0,001$. Nilai kelayakan booklet online adalah menarik dan layak digunakan tanpa revisi (rata-rata = 92,00 (SD=9,85)). Kesimpulannya, booklet herbal online teruji valid, efektif meningkatkan pengetahuan dan layak digunakan sebagai media pembelajaran bagi ibu menyusui.

Kata kunci: ibu menyusui, kelayakan, online herbal booklet, pengetahuan

ABSTRACT

Indonesia is rich in herbs for breastfeeding healthcare, but young mothers' knowledge about them is limited. Online herbal booklets are crucial for breastfeeding mothers to enhance their knowledge and serve as a valuable learning tool in health promotion activities. The study aimed to create online herbal booklet and test its validity, effectiveness, and feasibility to increase knowledge about the use of herbs for breastfeeding mothers in maintaining health. It was a research and development method. The contents of the booklet were compiled through a literature study. The booklet was created by the research team, validated by experts, and tested on small-scale respondents. The Aiken validation was assessed by three material experts, two language experts, and four design experts. A purposive sampling technique was used to select thirty (30) breastfeeding mothers from Beku, Karanganyar, Klaten, who took part in the trial at the Poltekkes Kemenkes Surakarta—the trials aimed to test the effectiveness of online booklets in increasing knowledge and testing feasibility. The online booklet needed revisions before being tested on respondents. Aiken validation confirmed its validity (Aiken's V score = 0.874). The online booklet increased knowledge, as indicated by a pre-test and post-test mean difference of 7.5 (SD = 10.9) and a $p\text{-value}$ of 0.001. The feasibility test's result showed the booklet was interesting and suitable to use without revision (mean = 92.00 (SD=9.85)). In conclusion, the online herbal booklet was found

to be valid and effective in increasing knowledge, making it a suitable learning medium for breastfeeding mothers.

Keywords: booklet herbal online, breastfeeding mothers, feasibility, knowledge

INTRODUCTION

The postpartum period is a six-week period during which a mother recovers from the birth of the baby to the recovery of her womb-related organs[1]. Breast milk is a vital and natural food source for babies, providing essential nutrients that support their growth and development. Therefore, breastfeeding mothers should focus on increasing breast milk during the postpartum period [2].

Postpartum services emphasize the needs of mothers and babies, focusing on prevention, early detection, and treatment of complaints or abnormalities, breastfeeding, planning to use contraceptives, immunizations, and nutrition[1]. Herbs or herbal medicine can help mothers achieve smooth breastfeeding and meet their nutritional needs. Research by Paryono and Kurniarum suggests that the consumption of herbal medicine by breastfeeding mothers can provide nutrition, prevent diseases, and promote successful breastfeeding for babies[3]. Insufficient scientific research limits the use of herbal medicine during breastfeeding, necessitating health workers to educate mothers about its safety and efficacy [4]. The community should continue to receive information about common herbal use through online media, print, and outreach activities to make informed health decisions, promote responsible use, and prevent negative health outcomes by accessing accurate information about benefits and risks[5], [6].

Providing information to the public generally requires learning media to facilitate the reception of messages. Learning media facilitate easy communication and understanding of messages, thereby enhancing the public's learning experience by acting as an intermediary between the sender and recipient. Media can increase efficiency and help achieve learning goals [7]. Booklets are a form of learning media, combining books and leaflets, approximately 50 pages thick, designed with writing and illustrations for public information. Online booklets are a type of digital booklet that offers organized learning materials in an electronic format, featuring animation, audio, and navigation to facilitate interactive and informative learning. It makes online booklets easy to understand and an exciting learning medium[8].

Therefore, developing an online booklet on herbal use for breastfeeding mothers is essential as a learning medium to enhance their knowledge during the breastfeeding period. Online booklets are particularly suitable for postpartum mothers in rural areas because of their accessibility, broad reach, and flexibility in presenting complex information. They can be easily customized, updated, and adapted to individual needs. Unlike educational videos that require stable internet connections and specific devices, online booklets are more practical and accessible, making them an effective tool for reaching mothers in areas with limited digital infrastructure[9]. Research by Emilda et al. demonstrated that the use of a booklet in health education can significantly enhance postpartum mothers' knowledge of lactation management. Although audiovisual media were also effective, booklets provide a more practical and accessible alternative in areas with limited technology[10]. The online booklet was designed to be visually appealing and user-friendly, providing clear information on the safe and effective use of herbs for breastfeeding health care. To ensure its accuracy and relevance, the booklet required validation and feasibility testing before being implemented as a learning tool. Given its potential to enhance mothers' knowledge about herbal use during breastfeeding, this study aimed to develop, validate, and evaluate the effectiveness and feasibility of the online booklet as part of a research and development initiative.

METHODS

Study design and setting

It employed a research and development (R&D) approach, which aimed to develop products and verify their effectiveness and usefulness to the public. Researchers created an online booklet to provide information regarding herbal use during breastfeeding. Validators validated the online booklet regarding the material (content), language, and design. The respondents for the online booklet trial were breastfeeding mothers from Beku Village, Karanganom, Klaten Regency. The variable was a single variable, namely the effectiveness and feasibility of online booklets for breastfeeding mothers. The operational definition of variables was convenience and the ability to attract mothers and to improve their knowledge through an online booklet containing various herbs for breastfeeding mothers, which was designed, validated, revised, and tested.

The research was conducted from May to December 2023. The online booklet was developed at the third campus of Poltekkes Kemenkes Surakarta. Meanwhile, the respondents attempted to access the online booklet from their residences in Beku Village, Karanganom, Klaten, after they agreed to participate in the research.

Study participants and sampling

Thirty breastfeeding mothers from Beku Village, Karanganom, Klaten, who met the inclusion criteria, participated in the small-scale online booklet trial. Participants were selected using purposive sampling, with inclusion criteria being breastfeeding mothers willing to participate, while those unable to operate a computer or smartphone were excluded. Recruitment was conducted by the research team in collaboration with village midwives to identify eligible participants. Prospective respondents were invited to Poltekkes Kemenkes Surakarta, where the research team explained the study's objectives, benefits, procedures, and participants' rights and responsibilities. Participation was entirely voluntary, and respondents were free to decline. After the briefing, all 30 mothers agreed to participate and signed the informed consent form.

Ethical Consideration

Ethical principles were upheld by ensuring participants were fully informed about the study's objectives, methods, potential benefits, confidentiality, and voluntary participation. Respondents could withdraw at any stage without consequence. Written consent was obtained for participation, including questionnaire completion, interviews, and use of anonymized data. Participant identities were protected through the use of pseudonyms and codes. Ethical approval was granted by the Health Research Ethics Committee of Dr. Moewardi Regional General Hospital, Surakarta (No. 939/V/HREC/2023, dated May 29, 2023).

Data Collection

Making Online Booklets

The online booklet provides comprehensive guidance on the safe and effective use of herbs during breastfeeding, covering: (a) the postpartum period, (b) cesarean recovery, (c) care after episiotomy and vaginal hygiene, (d) postpartum mobilization, (e) breastfeeding problems and herbal remedies, (f) herbal care for the face, hair, body, and abdomen, (g) herbs for hemorrhoids, headaches, foot care, postpartum hypertension, and diabetes, and (h) aromatherapy. The content was developed through a literature review of books, journal articles, online news, and health regulations.

Validation involved nine experts: three material experts (herbal, complementary midwifery, and pharmacy), two linguists, and four design experts. To maintain objectivity, validators were selected from both within and outside Poltekkes Kemenkes Surakarta. The process was conducted transparently and documented to minimize bias.

Validation followed a two-step process—qualitative feedback and quantitative assessment using Aiken's V, which measures inter-rater agreement on three main

aspects: material, language, and design. Material assessment focused on accuracy, clarity, and visualization; language assessment on clarity, communicativeness, and consistency; and design assessment on appearance, usability, and practicality. Revisions were made based on expert suggestions before final validation, ensuring high-quality, reliable, and user-friendly educational media. The Likert scale to evaluate the Aiken's V validation of the online booklet, namely a score of '1' if the aspect is rated as not good, '2' if the aspect is rated as deficient, '3' if the element is rated as quite good, '4' if the aspect is rated as good, and '5' if the component is rated as very good. From the results of the validator's assessment based on the Likert scale, the V score was calculated using formula 1. Researchers calculated Aiken's V score and used the score to evaluate each aspect, forming a complete conclusion based on the average Aiken's V score as: a) very valid (high) is the average Aiken's V score is more than 0,85, b) Quite valid (moderate) is average Aikens's V Score of $0,4 < V \leq 0,8$, c) Less valid (Low) is average Aiken's V Score $\leq 0,4$ [11].

$$V = \frac{\sum S}{(n(c-1))} \dots \dots \dots (1)$$

$$S = r - lo$$

Information :

V: Average score

S: The value obtained from the validator number

n: number of validators

lo: Lowest validation assessment number

c: Highest validation assessment number

r: The number is given by the validator

Small-Scale Trials in an Online Booklet

The small-scale trial of the online booklet was carried out on thirty (30) breastfeeding mothers from Beku village, Karanganyam, Klaten. The trial evaluated the effectiveness and feasibility of an online booklet in enhancing knowledge about herbal use during breastfeeding with pre-test and post-test methods. The questionnaire of the effectiveness test has been validated by 21 breastfeeding mothers in Danguran village, South Klaten, Klaten, and showed that 34 of the 50 questions were valid with a calculated r value of 0.435-0.854 (r table 0.433).

The feasibility test of the online booklet was determined based on the respondents' responses, which they completed on the feasibility test questionnaire. The feasibility test questionnaire contained assessment indicators for a) the quality of the content, b) the appearance of the booklet, and c) the technical quality of the booklet. The questionnaire used a Likert scale to assess booklet eligibility criteria. The Likert scale assessment score, ranging from 1 to 5, expresses an assessment from 'not good' to 'very good'. The feasibility test's P score was determined using formula 2.

$$P = \frac{\text{score acquisition}}{\text{maximum score}} \times 100\% \dots \dots \dots (2)$$

The average of P score was categorized to three categories such as: a) Interesting and worth using without revision if rating average of 80% - 100%, b) Interesting and worth using with revision if the rating average of 50% - less than 80%, c) Not interesting and not worth using if the rating average of less than 50%. Based on the category, product development would end when the assessment score for the online booklet met the eligibility requirements, including the level of suitability of the material, suitability of the online booklet, and technical quality of the teaching materials.

Data Analysis

Univariate analysis was conducted on the data results from the validation test, the effectiveness test, and the feasibility test. The validity of the online booklet was analyzed using Aiken's V score and its categorization. Respondents' knowledge data were analyzed using mean and standard deviation (SD) values. Data from the booklet

feasibility tests were analyzed using mean and SD values and categorized based on the mean results. Bivariate analysis used the t-test to compare knowledge scores before and after respondents read the online booklet, based on the normal distribution of the data as determined by the Shapiro-Wilk test.

RESULT

A literature study was conducted to prepare the learning material for the online booklet. The initial online booklet draft, created in PowerPoint format, aimed to condense the learning material, making it more accessible and easier to understand. The initial draft is 68 pages, featuring a green background, illustrations of breastfeeding mothers, and herbs for postpartum and breastfeeding care (Figure 1).



Figure 1. The Initial Draft of the Online Booklet

The initial draft of the booklet included material on the basic concepts of the postpartum period, intimate organ care, breastfeeding health, and herbal use. However, the research team found it lacking in layout, color harmony, and visualization quality (Figure 2). To enhance readability and visual appeal, revisions were made by adopting a white-and-blue background and updating the cover illustration. The revised 86-page version featured clearer, more context-appropriate illustrations aligned with the material and was subsequently submitted to expert validators for evaluation.



Figure 2. The Initial Draft of the Online Booklet after Improvement

Validators suggested revising the material content by simplifying medical terminology into more public-friendly language and improving design consistency in typography, sentence structure, and illustration layout. Based on these recommendations, the initial draft of the booklet was revised, as shown in Figure 3. Key changes included an updated cover illustration, the replacement of technical terms with accessible wording, and refined postpartum care content, resulting in an 88-page revised version. The finalized booklet was uploaded to Heyzine.com for easier access and reformatted into a tabloid-style layout, available at <https://heyzine.com/flip-book/541cef9de4.html>. Figure 4 presents the online booklet's thumbnail view on Heyzine.com, optimized for smartphone use.

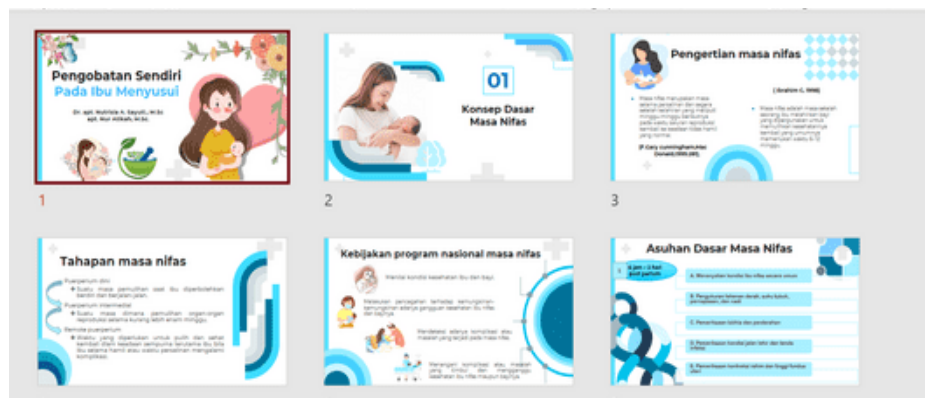


Figure 3. The Draft of the Online Booklet is Ready for Aikens V Validation

The right arrow indicates the location where respondents can click to access the next page. Figure 5 shows the online appearance of a herbal booklet, resembling a magazine with two pages displayed in a single view.

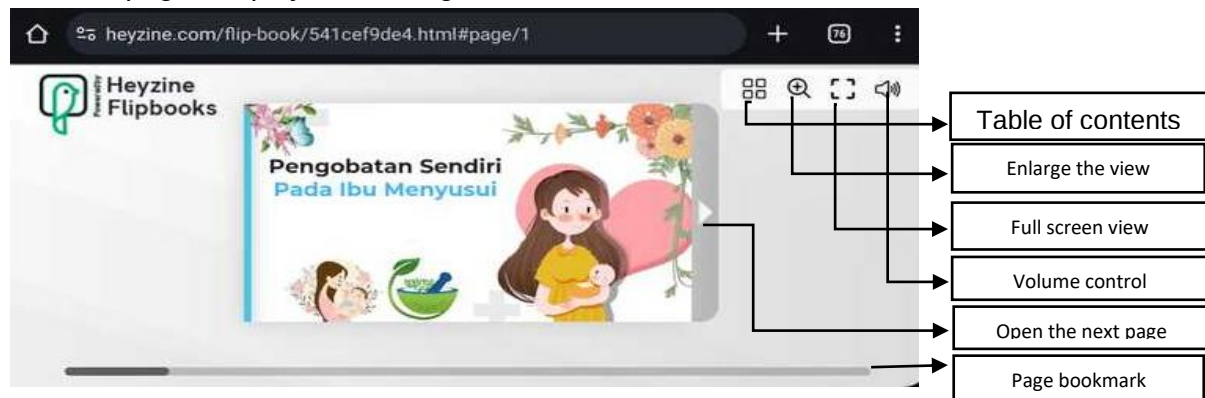


Figure 4. Display on the Smartphone of the Online Booklet on Heyzine.com



Figure 5. Booklet Online Page Display When Opened on a Smartphone

The final draft of the booklet was validated using Aiken's V method, yielding a mean score of 0.874, which falls into the very valid category (Table 1). The online booklet was then introduced to respondents on August 26, 2023, at Poltekkes Kemenkes Surakarta. Before dissemination, a pre-test assessing respondents' knowledge of herbal use for health treatment during breastfeeding was administered using a validated questionnaire. After completing the pre-test, respondents received a link to the online booklet, which they could access and study for two weeks. The post-test was conducted on September 9, 2023, accompanied by a feasibility survey integrated into the online booklet to evaluate its usability and effectiveness.

Table 1. The Validation Result of Online Booklet by Material, Language, and Design Experts

No	Validation Discussion	Number of Experts	Aspect	Aiken's V Score	Validity Statement
1	Material	3	Completeness and accuracy of material	0.880	Very Valid
			Clarity of Material Discussion	0.896	Very Valid
			Accuracy of visualization with Material	0.883	Very Valid
			Material Average	0.884	Very Valid
2	Language	2	Straightforwardness	0.938	Very Valid
			Communicative	0.906	Very Valid
			Dialogic and Interactive	0.958	Very Valid
			Conformity to language rules	0.833	Valid
			Consistency in the use of terms, symbols, and icons	0.906	Very Valid
			Language Average	0.910	Very Valid
3	Design	4	Appearance	0.801	Valid
			Use	0.859	Very Valid
			Utilization	0.875	Very Valid
			Design Average	0.826	Valid
Mean Aiken's V Score of the Online Booklet				0.874	Valid

Table 2 lists the characteristics of the respondents. Most respondents were early adults with intermediate education and worked as housewives with 1-5 children (multiparous). The majority of breastfed babies were boys, and the majority of breastfeeding mothers did not use herbs during breastfeeding.

Table 2. Respondent Characteristics (N=30)

Characteristics	n(%)
Age (Mean ± SD)	29.9 ± 4.0
Age Classification	
Late teens (17 – 25 years)	6(20)
Early Adulthood (26 – 35 years)	22(73.3)
Late Adulthood (36 – 45 years)	2(6.7)
Level of Education	
Basic	2(6.7)
Intermediate	20(66.7)
High	8(26.7)
Work	
Work outside the home	6(20)
Housewife	24(80)
Number of children (Minimum – Maximum)	1 – 5
Live Birth Status	
Primiparous	9(30)
Multiparous	21(70)
Gender of the baby being breastfed	
Boys	16(53.3)
Girls	13(43.3)
Girls and Boys	1(3.3)
Do you Use Herbs?	
Yes	14(46.7)
No	16(53.3)

Table 3. The result of the Online Booklet's Trial at Respondents' Knowledge (N=30)

Exam Type	Score Mean (SD)	Normality	Difference Mean (SD)	95%CI of the difference	p-value
Pre-test	52.5 (8.3)	0.351	7.5 (10.9)	3.4 – 11.5	0.001
Posttest	60.0 (13.5)	0.518			

Pretest and posttest were conducted to measure changes in knowledge after reading the online booklet. A positive difference was expected, with posttest scores higher than

pretest scores, indicating improved understanding of herbs during breastfeeding. As shown in Table 3, the average knowledge score increased by 14.29% after two weeks of booklet access. The difference was statistically significant ($p = 0.001$).

Table 4. The Result of Online Booklet's Feasibility Assessment by Respondents (N=30)

No	Validation discussion	P Score Mean (SD)	Eligibility Category
1	Content Quality	93.83(8.58)	Interesting and worth using without revision
2	Booklet Display	92.33(10.97)	Interesting and worth using without revision
3	Technical Quality	89.83(12.90)	Interesting and worth using without revision
Mean (SD) of Total P Score		92(9.85)	Interesting and worth using without revision

Table 4 presents the results of the online booklet feasibility assessment, showing that all three evaluation aspects were rated as "interesting and worth using without revision." Meanwhile, Table 5 indicates that two respondents (6.67%) rated the booklet as "interesting and worth using with revision." Some respondents noted that access speed depended on the quality of the internet connection, with buffering occurring in areas with weak network coverage.

Table 5. Frequency Distribution of Online Booklet Eligibility Categories (N=30)

Eligibility Category	n(%)	Respondents' Opinions
Interesting and worth using without revision	28(93.33)	Respondents were more aware of the herbs that have been used as cooking spices, which are effective for smooth breastfeeding, and herbs for rinsing the vagina
Interesting and worth using with revision	2(6.67)	Because it is online, it depends on the signal; the Booklet keeps buffering if it is opened in a location with a weak signal. Respondents suggested that a printed version of the booklet should also be provided.

DISCUSSION

The development of the online booklet was conducted through research and development procedures adapted from Dick and Carey's research and development method. Dick and Carey's instructional design method is a systematic approach to creating practical learning experiences, focusing on analyzing, designing, developing, and evaluating instruction using a systems approach [12], [13]. The research was conducted through five steps: analysis, design, development, implementation, and evaluation [14]. The analysis stage focused on identifying health needs during the postpartum and breastfeeding periods through a literature review covering related issues and appropriate herbal solutions. In the design stage, the research team developed the material and created the initial online booklet draft using PowerPoint. One round of revision was conducted before expert validation. Initially, experts reviewed the content qualitatively, offering feedback on material accuracy, language clarity, and design layout. Following these improvements, the revised booklet was uploaded to Heyzine.com and quantitatively validated using Aiken's V. This process demonstrates the iterative refinement typical of research and development (R&D) methods [14]. Aiken's V score indicates the online booklet's validation of valid categories. It noted that the online booklet was suitable for use as a learning medium.

Most respondents were adults with moderate education levels and multiparous status. Assessing respondent characteristics is crucial since demographic factors such as age, education, experience, and environment significantly influence how individuals process and apply information. Exposure to learning media and prevailing myths also shapes breastfeeding mothers' understanding. Notably, educational attainment strongly determines mothers' ability and motivation to pursue continuous learning about health-related topics[15]. Parity status can lead to knowledge disparities among breastfeeding mothers due to mental condition differences between primiparous and multiparous

mothers. Vardanjani et al. found that primiparous mothers often experience anxiety due to a lack of breastfeeding.

In contrast, multiparous mothers are more experienced and adaptable post-birth [16]. Multiparous mothers had a higher perception of physiological breast swelling than primiparous mothers [17]. Total scores related to fear of childbirth, fetal health, self-control, and labor pain injury in multiparous women were significantly reduced compared to primiparous [18]. Primiparous mothers have less knowledge about vulva hygiene during the postpartum period and signs of newborn welfare than multiparous mothers [17], [19]. Sources of information that play a crucial role in knowledge acquisition include mass media, formal education, and counseling [19]. Differences in health knowledge-seeking behavior between primiparous and multiparous women are influenced by childbirth experience and information sources. Primiparous mothers tend to rely more on healthcare providers, frequently seeking professional guidance to address breastfeeding challenges and validate information obtained from mass media. In contrast, multiparous mothers are more likely to rely on prior experience and self-study, visiting healthcare facilities primarily for routine national programs such as vaccinations or contraceptive services. [20], [21], [22].

The majority of breastfed babies were baby boys. Baby boys usually breastfeed better than baby girls. Baby boys drink generally around 831 mL daily, while baby girls usually drink around 755 mL daily [23]. Gender differences in breastfed babies significantly impact the physicochemical properties and biochemical content of the mother's breast milk, as well as the milk's composition. Mothers with baby boys have higher protein and acidity in their breast milk [24], [25]. Mothers with baby boys can use herbal medicines to maintain breast milk volume and quality, and learn about increasing milk volume through early breastfeeding or the use of herbal medicine[26].

The majority of respondents were not using herbs during postpartum. It indicates a decline in the traditional use of herbs. The decline in herbal use postpartum may be due to limited scientific evidence, drug interactions, and the need for clinical supervision. At the same time, misinformation about its benefits can lead to unsafe consumption[27]. Herbal users are expected to possess a deeper understanding of herbs due to their experience in postpartum and breastfeeding periods [15]. Continuous efforts to enhance knowledge about herbal use during breastfeeding are crucial to prevent misinformation and adverse events of herbal use [28], [29]

The online booklets effectively enhanced the knowledge of breastfeeding mothers about the use of herbs during breastfeeding. These results were followed by Kostania et al., who stated that online booklets could be used as a learning medium to improve respondents' knowledge about specific material [30]. These findings align with previous research conducted at the Romauli ZR Clinic in Medan Marelan District, North Sumatra, which showed that online booklets used as counseling media effectively improved postpartum mothers' knowledge and attitudes toward exclusive breastfeeding. The study demonstrated that online booklets significantly increased understanding and fostered more positive perceptions and behaviors related to exclusive breastfeeding.[31].

The feasibility test results indicated that the online booklet was appropriate and suitable for use without revision. The flipbook-format design—with attractive visuals, engaging content, and online accessibility—enhanced learning outcomes by reducing monotony and offering varied learning experiences. As a learning medium, the online booklet proved practical due to its concise explanations, systematic presentation, and illustrative visuals that effectively support readers' understanding of key concepts and information. [32].

Two respondents reported difficulty accessing the online booklet due to poor or absent internet connectivity. Several areas in Beku Village, Karanganom, Klaten, experienced slow or unstable networks, limiting access to the material. These findings highlight the

need to improve internet infrastructure in rural regions to support digital learning. Consistent with Hampton et al., inadequate internet access indirectly impacts learning outcomes by slowing task completion and reducing engagement with online educational media [33].

Public digital literacy enhances understanding and effectiveness in online learning by facilitating easier access and operation of digital media. However, excessive time spent on online platforms negatively affects comprehension and can lead to gadget addiction. Thus, proper time management is essential to prevent dependency, which may harm cognitive development, attitudes, and behavior[33]. Effective public communication is also crucial for social resilience, as Indonesian people tend to prefer face-to-face interaction and offline learning for social support, including information sharing, financial assistance, emotional support, and practical help [34].

This study was limited by the absence of a control group, as no alternative learning media were used for comparison, and effectiveness was assessed solely through pre- and post-test knowledge scores. Internet dependence also posed challenges, as limited connectivity could affect access and outcomes. This issue may be mitigated by using the booklets in areas with stable connections, such as during midwife-led counseling in village halls or health centers. The study also highlights the need to expand internet access in remote Indonesian regions. Practically, online booklets effectively improve breastfeeding mothers' knowledge about herbal use, as demonstrated in Beku Village. More broadly, they can serve as accessible educational tools for rural communities—enhancing mothers' understanding and supporting midwives in delivering clearer, evidence-based counseling.

CONCLUSION

The online booklet was valid, effective, and feasible for increasing mothers' knowledge about the use of herbs for health treatment during the breastfeeding period. The study highlights the potential of online herbal booklets as a valuable learning tool for breastfeeding mothers, highlighting the need for internet network expansion in Indonesia and further research on self-medication and applications, as well as the use of herbal booklets by health workers and village midwives.

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