

## **DEVELOPMENT OF ELECTRONIC BOOKLETS-BASED COMMUNITY EDUCATION MEDIA FOR HYPERTENSION PATIENTS IN RAHAYU PUSKESMAS, BANDUNG REGENCY**

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### **Abstract**

The purpose of this study was to develop an Electronic Hypertension Booklet as an educational medium at the Rahayu Public Health Center, Bandung Regency and to test the feasibility of the electronic booklet that was developed, so that it could be used in the community effectively. The research method used in this study used research and development that adopting the Borg and Gall research model. The instrument used in this data collection is using a validation sheet in the form of a questionnaire and data analysis to calculate the answer score, it takes respondents, namely Hypertension Patients as the target of this research trial, as many as 40 users. And 4 people as experts. The total subjects in this study were 44 people. Digital booklet validation from the assessment questionnaire and expert validation which consists of 3 aspects, namely material, language, and design (media) aspects and all of them are very supportive. The results from the assessment of experts, namely material experts, media experts and linguists are in the very category good with a percentage of 94.6%. Thus, the feasibility test of this module was carried out in two stages as follows: The first stage was the validation test of the material for the design of the booklet media, the results were very good (92.5%) stating that the electronic booklet media as an educational medium for patients was suitable for use as a learning medium. Then proceed with the second stage of testing with . With the results of expert validation and people with hypertension, the results of the development of this electronic booklet with the criteria of "very feasible".

**Keywords:** Electronic Booklet, hypertension sufferers

### **Abstrak**

Tujuan penelitian ini untuk mengembangkan Elektronik Booklet hipertensi sebagai media edukasi di Puskesmas Rahayu Kabupaten Bandung dan menguji kelayakan dari elektronik booklet yang di kembangkan, sehingga dapat di gunakan di masyarakat secara efektif. Metode Penelitian yang di gunakan pada Penelitian ini menggunakan penelitian (research and development) yang mengadopsi model penelitian Borg and Gall . Instrumen yang digunakan dalam pengumpulan data ini yaitu menggunakan lembar validasi berupa angket dan analisis data untuk menghitung skor jawaban, maka dibutuhkan responden yaitu Penderita Hipertensi sebagai sasaran uji coba penelitian ini adalah pengguna sebanyak 40 orang. Dan 4 orang sebagai ahli. Total subyek dalam penelitian ini adalah 44 orang. Validasi booklet digital dari olah dari angket penilaian dan validasi ahli yang terdiri dari 3 aspek, yaitu aspek materi, bahasa, dan desain (media) dan semuanya sangat mendukung. Hasil dari penilaian para ahli yaitu ahli materi, ahli media dan ahli bahasa termasuk dalam kategori sangat baik dengan persentase sebesar 94,6%. Dengan demikian, maka uji kelayakan modul ini dilakukan melalui dua tahap sebagai berikut : Tahap pertama uji validasi materi rancangan media booklet, hasilnya sangat baik (92,5%) menyatakan media booklet elektronik sebagai media edukasi bagi pasien layak digunakan sebagai media pembelajaran. Kemudian dilanjutkan dengan tahap kedua uji coba dengan . Dengan hasil validasi ahli dan penderita hipertensi maka hasil pengembangan elektronik booklet ini dengan kriteria “ sangat layak “Kesimpulan dari penelitian ini adalah elektronik booklet yang telah di kembangkan sangat layak di gunakan sebagai media edukasi kepada masyarakat pada umumnya dan penderita hipertensi pada khususnya.

**Kata Kunci:** Elektronik Booklet, penderita hipertensi

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## INTRODUCTION

The government's efforts to manage hypertension in the community are through health promotion, early detection, and case management. This condition requires a special management strategy so that the results are better. Various kinds of educational media, including booklets are communication media that are included in the below the line media category. However, given the current pandemic conditions, electronic booklets are considered as suitable media to deal with current conditions. According to the nature inherent in the bottom-line media, messages written on the media are guided by several criteria, namely: using short, simple, concise, concise sentences, using large and bold letters. In addition, the use of letters is not less than 10 pt, attractively packaged and the words used are economical (E. Fitriana, 2012), but in this study the researchers chose electronic booklets because they have advantages, namely in terms of costs, they are quite cheap, only share booklet files via barcode scans. , and the message conveyed can contain the topic in detail and clearly and can further develop the message to be conveyed.

Booklet is one of the visual education media. From reading Hypertension education booklets and their therapy, people will gain knowledge that will change people's behavior to be more positive and improve people's behavior in undergoing Hypertension therapy. The electronic booklet which is used as an educational medium can be viewed on a mobile phone, so it can be read over and over again and stored. The preparation of this electronic booklet is adapted to the needs and conditions of people with hypertension so that it attracts the attention of the readers. In addition, electronic booklets can reduce printing costs, because most of the budget is experiencing budget refocusing for the handling of the Covid-19 pandemic, and by implementing electronic booklets it can be easier to implement 3M (keep your distance, wash your hands, wear a mask), especially at the point of Keeping Distance, people can see booklets directly on their respective cellphones.

Rahayu Health Center is a health center located in Margaasih District, Bandung Regency. This health center is a health service center that serves people of various ages and health problems. The number of hypertension prevalence rates at Rahayu Health Center is the highest prevalence of 62 Puskesmas in Bandung Regency. Based on data from the Bandung District Health Office in 2020, the prevalence of hypertension in Rahayu Health Center is 95%.

Based on the results of a preliminary study on July 1, 2021, the general polyclinic receives approximately 15 hypertension patients every day. This is caused by a lack of public knowledge of the benefits of preventing hypertension, therefore the electronic booklet educational media is expected to be able to increase knowledge so that it changes people's behavior to always prevent it from an early age.

Education in the Kamus Besar Bahasa Indonesia (KBBI, 2003: 156) is also called education, which means the process of changing the attitudes and behavior of a person or group of people in an effort to mature humans through teaching and training efforts; process, method, and act of educating.

Education or education in general is all planned efforts to influence other people, whether individuals, groups or communities, so that they do what is expected by education actors, which is implied in education are: input is the target of education (individual, group, and community), educators are educational actors, the process is a planned effort to influence others, the output is doing what is expected or behavior (Notoatmodjo, 2012).

Hypertension or high blood pressure is an increase in systolic and diastolic blood pressure of more than 140/90 mmHg on two measurements with an interval of five minutes at rest. An increase in blood pressure in the long term can cause kidney failure, coronary heart disease, and stroke if not detected early and with adequate treatment (Ministry of Health, 2014). This is one of the diseases that needs to be treated specifically and early on, so as not to pose a serious risk, namely stroke or death. So education about hypertension needs to be done in order to reduce the number of hypertensive patients.

Meanwhile, booklet is one of the information media that can be developed both in print and electronically. Booklet is one of the media for public education, because the aim is to expand the range of information that needs to be conveyed to the public (Darmawan & Abdulhak, 2013: 45). Thus, the presence of electronic booklets is expected to expand the reach of information access. This is because electronic booklets can be easily disseminated through online information media.

## **METHOD**

This study uses research (research and development). Research and Development is a research method used to produce certain products and test the effectiveness of products, namely developing an Electronic Hypertension Booklet as an educational medium for people with hypertension at Rahayu Health Center, Bandung Regency. To calculate the answer score, it takes several respondents, namely the patient as the target user as many as 40 people who are recorded at the Rahayu Health Center. There are 1 doctor and Health Promotion Personnel as material experts each who work at Rahayu Health Center. 1 linguist. There are 1 media designer as an image expert or organizer of the booklet content arrangement, who works in the health promotion section at the Bandung District Health Office. The total subjects in this study were 44 people. Digital booklet validation from the assessment questionnaire and expert validation which consists of 3 aspects, namely material, language, and design (media) aspects. The results of the assessment of experts, namely material experts, media experts and linguists.

## **RESULTS AND DISCUSSION**

### **Result**

Digital booklet validation from the assessment questionnaire and expert validation which consists of 3 aspects, namely material, language, and design (media) aspects. The results of the assessment of experts, namely material experts, media experts and linguists were included in the very good category with a percentage of 94.6%. Thus, the feasibility test of this module was carried out in two stages as follows: The first stage was the validation test of the material for the design of the booklet media, the results were very good (92.5%) stating that the electronic booklet media as an educational medium for patients was suitable for use as a learning medium. Then proceed with the second stage of testing with . With the results of expert validation and hypertension sufferers, the results of the development of this electronic booklet are "very feasible".

### **Discussion**

This research and development is carried out using the Borg and Gall (1983) model which has been modified by Sugiyono (2013). This research and development model consists of only 7 stages, namely (product revision), because this research only arrived at a limited trial with the aim of knowing the results of the feasibility of developing booklet media.

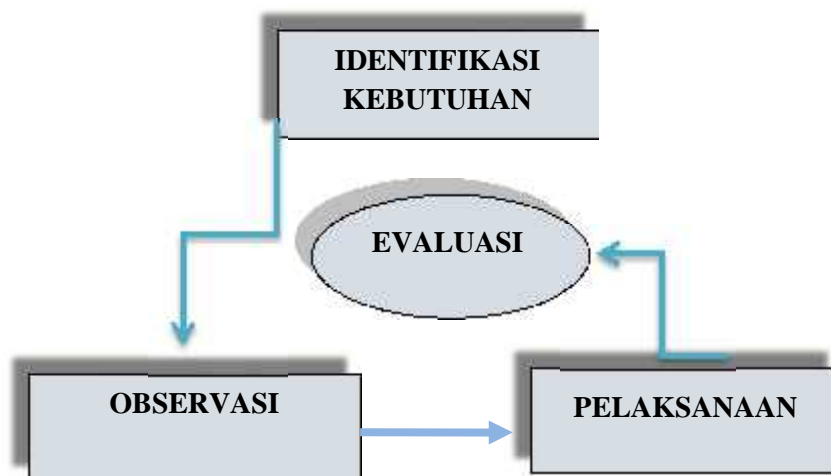


Figure 1. Flow of Electronic Booklet Development as an Educational Media

The steps for developing a media booklet begin with the potential and problem stages. In the process of developing educational media, it begins with a preliminary study stage, namely by conducting a needs analysis. Needs analysis is carried out in the form of observation and interviews because this can provide data/information needed by researchers. After conducting an analysis by means of observation and interviews with patients with hypertension, it is necessary to have educational media that can increase the goodness of students to read.

Submission of material on learning media is expected to be able to increase sample interest in the material presented in the booklet, because the material presented is presented in a good and simple way. Booklets as educational media are equipped with pictures for easy understanding and provide an overview to students in an easy and good way. After making observations, it is necessary to study literature to solve existing problems so that educational media in the form of booklets are as expected, namely by looking for relevant references. The introduction of booklets to people with hypertension can provide learning that can increase interest in reading, so that the implementation of the diet for people with hypertension can be carried out.

Based on the results of the validation test, the material expert stated that the feasibility level of the booklet as an educational medium for people with hypertension reached 90%. Likewise, based on the results of expert validation in terms of media, it shows that the media feasibility level reaches 97.5%. The results of the validation of linguists reached 92.5%, while the results of product assessments from patients with hypertension showed a product feasibility level of 94.1%. So it can be concluded that the results of the product test assessment on the results of the assessment carried out, both in terms of material, media, language, and hypertension sufferers obtained an average rating of 92.5%. The percentage is accompanied by a statement that the product is said to be very good and does not need revision.

According to Mulyatiningsih (2014) it is important to do product trials first to anticipate errors that can occur during the actual implementation of the model, as well as to analyze the obstacles that may be faced and try to reduce these obstacles when implementing the next model.

The development of booklet media as an educational medium that must be considered is its feasibility as an educational medium. The feasibility of the booklet media in this study

was seen from several aspects, namely aspects of validity, aspects of practicality, response to media, and aspects of effectiveness.

The practical aspect of the media is carried out with the aim of testing the practicality of the development product in its use. The data obtained respectively from the experts are 90%, 97.5% and 92.5%. From these data, the developed media is practical and can be used in the field according to expert advice. This is supported by research conducted by Busran & Fitriyah (2015) which states that the media developed is practical with no revisions or few revisions.

## CONCLUSION

Based on the results and discussion in this study about the Development of Electronic Booklets as Educational Media for Hypertension Patients at Rahayu Health Center, Bandung Regency, it can be concluded that:

1. The development of electronic media for this booklet is carried out using the Borg and Gall model which has been modified by Sugiyono. This research and development model consists of only 7 stages, namely (product revision), because this research only arrived at a limited trial with the aim of knowing the results of the feasibility of developing booklet media.
2. The feasibility test of this module was carried out in two stages as follows: The first stage was the validation test of the material for the design of the booklet media, the results were very good (94.4%) stating that the booklet media as an educational medium for people with hypertension was suitable to be used as a learning medium. Then proceed with the second stage of the trial with 40 hypertensive patients with 95% results.

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