



Disaster Emergency Preparedness for Pregnant Mothers and Family Audio Visual Media Feasibility Analysis in Karangnunggal Tasikmalaya

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Abstract. Background: Disasters cannot be prevented, because disasters can come anytime, anywhere and to anyone, even undetected and can take many lives. The community needs to obtain complete information about disaster problems, so that victims can be minimized. Women are included in a vulnerable group and require special handling during emergency response. Special handling for women victims of disasters during the emergency response period. One of the efforts in providing health education or promotion is by using audio-visual media. Design Objectives: To design Audio Visual media as a health promotion media used by midwives in helping pregnant women deal with disaster situations. Research Methods: This study uses research and development methods or Research and Development (R&D). Research and development or Research and Development. The application will go through stages in research and development methods including: potential and problems, data collection, product design, design validation, design revision, product trials, product revisions, usage trials, product revisions and mass production. The results of the Validation Research by media experts showed that the evaluation results of the VISUALS aspect by media experts contained 1 aspect (Useful) which got very good results and 4 aspects got good scores. Validation by material experts 5 aspects of Good value. The results of the evaluation of the quality and content aspects by small group respondents, there were very good results as many as 4 people and 4 people with good categories. Conclusion this research goes through the stages of potential problems, needs analysis, data collection, product design, design validation, product trial design revision, product revision, usage trial and product revision. Audio Visual Media Design for Disaster Emergency Preparedness has been tested for feasibility. Suggestion: Media can be developed by large group research and how effective is the audio media for maternal preparedness.

Keywords: Audio Visual Media · Disaster Preparedness

1 Introduction

1.1 Background

Almost all parts of Indonesia are prone to various forms of natural disasters. This is because Indonesia is one of the countries in the world which is located in the ring of fire. Along this path, there are 80 percent or 452 volcanoes of all the volcanoes in the world. About 90 percent of the world's earthquakes occur in the ring of fire. (Mediaindonesia.com, 24 February 2018).

Recently, there was an earthquake-tsunami disaster in Central Sulawesi with a magnitude of 7.7 on the Richter scale with an epicenter and a depth of 10 km at a position 27 km northeast of the Donggala Sea. (Research Center, 2018) The National Disaster Management Agency (BNPB) reported that 2,045 people died, 10,679 people were seriously injured and 671 people were missing. A total of 82,775 people were reported to have evacuated at a number of points and 67,310 houses were damaged. (Kompas.com, 2018).

Disasters cannot be prevented, because disasters can come anytime, anywhere and to anyone, even undetected and can take many lives. The community needs to obtain complete information about disaster problems, so that victims can be minimized. This implies that the community needs to know what threats occur as a result of disasters, including knowing who the most vulnerable groups are (priority for help). Helped. (Setianingsih, 2019).

Law No. 24 of 2007 concerning disaster management states that disaster proneness is a geological, biological, hydrological, climatological, geographical, social, cultural, political, economic and technological condition or characteristic in a certain area that reduces the ability to prevent, reduce, achieve readiness and reduce the ability to respond to the adverse effects of certain hazards. In addition, there has been a paradigm shift in disaster management in Indonesia, no longer emphasizing the cycle response aspect, but rather emphasizing the overall management of disaster management from mitigation, preparedness and emergency response to rehabilitation [17].

Women are included in a vulnerable group and require special handling during emergency response. Special handling for women victims of disasters during the emergency response period. Special handling of female refugees includes meeting specific needs, special services and separate refuges from men [9].

The handling of women victims of disasters really needs special treatment, because women also have special conditions, including the importance of anticipating the provision of services and providing special treatment for pregnant and lactating women. This is because during the emergency response period it is very likely that there will be pregnant women who will give birth and breastfeed, as happened in the refugee camps for victims of the Central Sulawesi disaster. Two pregnant women gave birth to twins during the emergency response period [11].

In 2018 the determination of the status of the emergency response to floods and landslides in Tasikmalaya Regency for 14 days in the flash flood disaster in Cipatujah District in the Southern Region of Tasikmalaya Regency, where land access to five villages in Cipatujah sub-district was cut off. The Regent of Tasikmalaya H.Ade Sugianto, S.IP advised all Tasikmalaya Regency to be vigilant about entering the rainy season.

Government officials, all health workers, the public must always be ready and alert. (Anonymous, 2018).

Health promotion efforts given to pregnant women in the face of disaster preparedness. Health Promotion, can use media or assistive devices which are all means or efforts that display messages or information that the communicator wants to convey, both through print, electronic and outdoor media, so that target knowledge can increase and ultimately change behavior in a positive direction. on Health [12].

One of the efforts in providing health education or promotion is by using audio-visual media. Audio visual media is an intermediary media or the use of material and absorption through sight and hearing so as to build conditions that can make a person able to acquire knowledge, skills or attitudes. (Ummysalam. 2017).

Health workers including midwives must have the ability to handle cases of pregnant women in disaster situations. Another effort is that pregnant women must be provided with information about preparation for dealing with emergency situations so that they have sufficient knowledge in dealing with emergency situations, and unwanted things do not happen to pregnant women. Guidance in helping pregnant women face disaster situations because pregnant women must be equipped with sufficient knowledge in their preparedness for disasters.

2 Research Methods

The research method used is Research & Development or development research. The population of this study was 45 students of 45 pregnant women in the first, second, and third trimesters of November and December 2020 in the Karang Nunggal Community Health Center, Cikukulu Village. The research sample amounted to 8 people. The research was conducted in November and December 2020.

3 Results and Discussion

The product produced in this study is audio-visual media in the form of video, which contains material on preparedness for pregnant women and their families in disaster emergencies. This material was taken based on a preliminary study in the working area of the Karangnunggal Health Center in 2020. At the initial stage the researchers had carried out the stages of research and development, namely the stage of seeing potential problems and analyzing needs, then collecting data by observing and interviewing pregnant women and village midwives. Local, after that do the product design.

Product design validation is carried out by media experts and material experts, product design revisions are in accordance with the results of the assessment by media experts and material experts, then product trials in small groups, if there is a revision from a small group, a revision will be made, but if not then followed by a trial of use in large groups, after which the results were seen whether there was a revision or not. The following are the results of research and development on audio-visual media for disaster emergency preparedness that have been carried out, namely:

3.1 Product Design

a) Flowchart

At the design stage, starting with making a flowchart as a flow of thought to simplify the development process. Flow charts are made to facilitate media work, namely using Adobe Illustrator, Adobe After Effects and Adobe Premier applications. Procedure for developing audio-visual media for disaster emergency preparedness according to the adaptation of the Design and Development model.

b) Storyboards

Furthermore, from product design, namely making an arrangement of story lines, namely story boards, which are arranged in a coherent manner according to the concept expected by the pin, then collaborating with a consultant, namely DENI, is made to make it easier to design a plot in the manufacture of audio-visual media for preparedness for pregnant women and their families in disaster emergencies.

iii) Development of Audio Visual Media

At the product design stage, previously the researchers made flowcharts and story boards as an initial design in the development of this birth preparation audio visual media, here are some stages of the development of labor preparation audio visual media, namely (Fig. 1).

3.2 Design Validation

In developing audio-visual media products, it is necessary to go through several validation processes and product trials. The validation in this study consisted of the validation of material experts and media experts. This process is carried out so that the product developed is suitable for use as a medium for health promotion for pregnant women.

a) Design validation data by Media Expert

This validation data was obtained by providing audio-visual media products, accompanied by a questionnaire attachment for the validator. This evaluation is given by media experts in the form of assessments and suggestions in oral and written form. Aspects validated by media experts are visible, interesting, simple, useful, accurate, legitimate and structure (VISUALS). The following is the final number of data from the results of

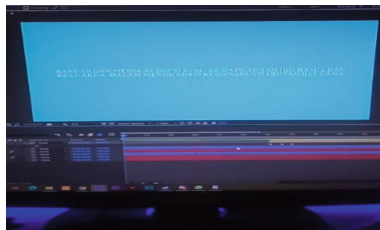


Fig. 1. Development of disaster preparedness audio media

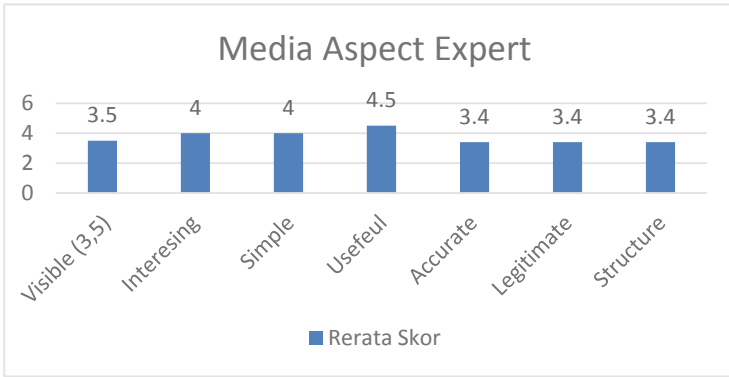


Fig. 2. Results of Questionnaire Evaluation by Media Experts

Table 1. Media Experts’ Suggestions and Recommendations

Number	Suggestions and Recommendations
1.	Visuals are more concise audio contains descriptions.

the evaluation of the questionnaire by media experts on the VISUALS aspect, namely: (Fig. 2).

The results from the table above, show that the results of the evaluation of the VISUALS aspect by media experts there is 1 aspect (Useful) which gets very good results with a value of 4.5 then 4 aspects (Visible, Intersting, Simple, Legimate and Structure) get good scores and those that shows a value between $3.4 < x < 4.2$ with a good average score.

In addition to the data above, media experts provide suggestions and recommendations for improvements that are made in writing, namely, as follows: (Table 1).

b) Result data by Material Expert

This validation data was obtained by providing audio-visual media products, accompanied by a questionnaire attachment for the validator. This evaluation is given to material experts in the form of assessments and suggestions in oral and written form.

The process of assessing material experts on audio-visual media was developed by looking at the results of the audio media design followed by filling out a questionnaire during the validation process. Material expert validation was carried out by Mr. Dudi Hartono, S.Kep, Ners, M.Kep at Poltekkes Kemenkes Tasikmalaya. Evaluation by material experts on aspects of truth, breadth and depth of material, language aspects, implementation aspects, video display aspects and audio aspects, namely: (Fig. 3).

The results from the table above, show that the results of the evaluation of all aspects by material experts there are 5 aspects that have a good value with an average value between $3.4 < x \leq 4.2$ with a good value.

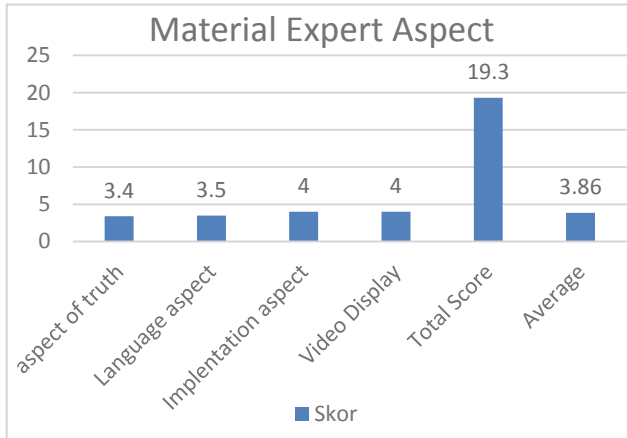


Fig. 3. Final Total Average Score All (Material Expert Aspect)

Table 2. Suggestions and Recommendations of Material Experts

Number	Suggestions and Recommendations
1.	The material is more focused on the readiness of pregnant women to face disaster emergencies and is brief

Apart from the data from the evaluation of the questionnaire, material experts provide suggestions and recommendations for improvements made in writing, namely: (Table 2).

The conclusion of the assessment given by the material is that it is appropriate. Following are the results of the assessment from pregnant women on the audio-visual media for the preparedness of pregnant women and their families in disaster emergencies (Fig. 4).

The results from the table above show that the results are in accordance with the evaluation of the quality of appearance and content aspects by small group respondents with a total score of 8.79 with an average score of 4.4 in the very good category.

5. Revision of product trial results in small groups

Based on the results of product trials in small groups, it shows very good results from every aspect. Some pregnant women give suggestions that this audio visual media is very good. Therefore, in the product trial stage from this small group, there is no revision and can be used for trial use in large groups.

6. Results of trials in large groups

Product trials in large groups have not been carried out. The trial will be carried out in further research.

7. Revise the results of the trial use in large groups

The revision of product trials in this large group has not been carried out because large group product trials have not been carried out.

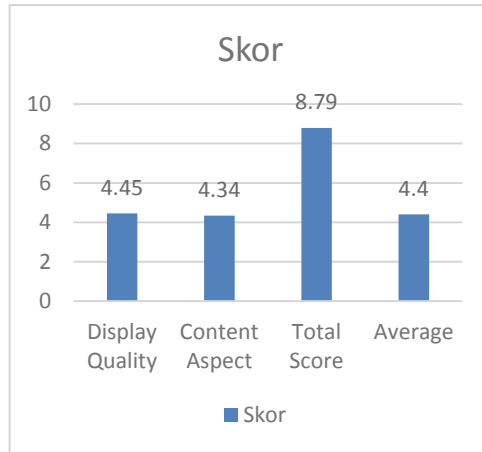


Fig. 4. Data on the Results of the Questionnaire Evaluation of Small Group Respondents

3.3 Discussion

Based on the results of research and development on the feasibility of audio-visual media design as a medium for health promotion for mothers in the Karangnunggal Health Center Work Area, it was carried out in November - December 2020 to produce the final product of visual media in the form of video. This audio visual media is very well targeted because it is compiled based on potential problems and needs analysis that has been carried out at the initial stage of research through a preliminary study on pregnant women and midwives in the Karang Nunggal Health Center area.

Based on the results of the assessments from media experts and material experts, it concluded that audio-visual media was in the good or decent category, then continued with product revisions and feasibility tests on small group respondents from the aspect of appearance and content quality, the average of all respondents by giving a good assessment. Very good.

In accordance with several definitions of health education/health promotion in Notoatmodjo (2005), health promotion is any combination of health education and interventions related to economics, politics, and organization, which are designed to facilitate behavior and a conducive environment for health. While health education is an effort made to the community, so that people are willing and able to maintain and improve their own health [16].

Various kinds of teaching aids in providing health education or learning, one of which is video. Video media (audiovisual) is one of the teaching techniques that has many advantages, because the media is a source of information that can affect a person's level of knowledge that does not only utilize the sense of hearing, but also the sense of sight [1]. In line with research by Eva.S, et al. (2015) which compared video media with the lecture method in counseling about premarital sex, it was found that there was a difference in the increase in adolescent knowledge after the intervention with the average score of the video media group 3.28 (1.7) and 2.19 (1.8) in the lecture group, meaning that the video media group was more effective than the lecture method group

in providing counseling about the impact of free sex on knowledge about the impact of free sex on students in grades X and XI at SMKN 1 Selupu Rejang Lebong. This shows that audio-visual media is more effectively used as a media for health promotion.

Audio-visual media is media that has sound elements and image elements. This type of media has better capabilities, because it includes both auditive (hearing) and visual (seeing) media types. Audio-visual media which is included in the electronic media group has the advantage that it is already known to the public, easier to understand, more interesting because there is sound and moving images, face to face, the presentation can be controlled, the reach is relatively larger, as well as a discussion tool and can be repeated.

According to Harginson's theory, learning by seeing can absorb 50%, and hearing 10%, so that providing health promotion using video media students can understand 60% of the material presented. Video media is an effective medium in delivering reproductive health education information. Health promotion using video media can increase adolescent knowledge and attitudes towards preventing early marriage. Judging from the results of the study, the increase in knowledge was greater than those who did understand certain materials and skills so that the explanations from the speakers could be directly understood by the audience [15]. Promotional media through video is a very good way of providing information because video media can be accessed by more than one human senses, especially hearing and sight. Because the more senses that play a role in the process of receiving messages, the reception of messages is getting faster and easier to catch.

In addition, according to Susilana & Riyana (2011) media such as video can overcome the limitations of space and time. Through video media, students can be invited to see the movement of cancer cells, or hear explanations from sources directly regarding knowledge about breast cancer. The effect of moving images will of course provide a richer learning experience than just using still images like in leaflets. With the video media in health promotion, students will quickly understand about breast cancer. In addition, video media can also make students focus on promotional materials because of the movement that makes the eyes focus on looking at the movement rather than just still images that tend to be monotonous.

4 Conclusions and Suggestions

4.1 Conclusion

- 1) The design of audio-visual media for disaster emergency preparedness as a medium for health promotion for pregnant women in the Karangnunggal Health Center area, Tasikmalaya Regency in 2020 through the stages of potential problems, needs analysis, data collection, product design, design validation, product trial design revision, product revision, testing try to use and revise the product.
- 2) Feasibility of the design of audio-visual media for disaster emergency preparedness as a media for health promotion for pregnant women in the Karangnunggal Health Center Area, Tasikmalaya Regency in 2020 carried out by media experts and material experts, to test the feasibility of conducting respondent exams for pregnant women.

4.2 Suggestion

For further research, it can be developed with large group research and how the effectiveness of the audio media for the preparedness of pregnant women and their families in dealing with disaster emergencies.

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