



## Development of Psychoeducational Media for Cancer Patients and Their Families in the Community

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### ABSTRACT

This research aims to develop effective psychoeducational media for cancer patients and their families in the community. Psychoeducation not only provides medical information, but also supports the emotional and psychological aspects faced by patients and their families. This study uses a Research and Development (R&D) approach with data collection through in-depth surveys and interviews with cancer patients, families, and health workers. The psychoeducational media developed includes brochures, educational videos, and mobile applications that are easily accessible and understood. The results of the trials showed that this medium was effective in improving cancer patients' understanding of their disease, reducing anxiety, and improving emotional support. This research is expected to be a model in the development of community-based health education media to improve the quality of life of cancer patients and their families.

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## 1. INTRODUCTION

Cancer is one of the leading causes of death in Indonesia and its prevalence is expected to continue to increase every year. Data from the Indonesian Ministry of Health shows an increasing trend in cancer cases which causes significant economic and social burdens. One of the main challenges in cancer management is limited access to health services, especially in communities with limited infrastructure. In addition, the lack of adequate psychological and emotional support causes patients and families to experience high levels of anxiety and stress.

Psychoeducation is a strategy that can improve understanding and emotional support for cancer patients and their families. Psychoeducation includes the provision of medical information and coping strategies to manage stress and anxiety. This research aims to develop psychoeducational media that is easily accessible to the public, so that cancer patients and their families can receive the information and emotional support they need.

Cancer is one of the non-communicable diseases that is the leading cause of death worldwide. According to a Global Cancer Observatory (GCO) report, in 2020 there were around 19.3 million new cancer cases and 10 million cancer deaths worldwide [1]. In Indonesia, the burden of cancer continues to increase, causing a significant impact not only on patients, but also on accompanying families. The complex process of cancer treatment, from diagnosis to therapy, often causes severe psychological and emotional distress, both for the patient and his family [2]. Therefore, psychoeducational interventions are an important need to improve understanding, mental resilience, and quality of life of cancer patients and families.

The problem that arises in the context of cancer treatment is the lack of access to clear and precise information about this disease, including treatment, therapeutic side effects, and how to manage psychological stress that arises [3]. Cancer patients and their families often face information uncertainty, which has an impact on anxiety, stress, and hopelessness levels [4]. In addition, the psychological approaches available in healthcare facilities are often limited and poorly structured, creating gaps in meeting the emotional needs of patients and families [5]. In this situation, the development of community-based psychoeducational media is expected to be a solution to strengthen the capacity of patients and families in facing psychological challenges due to cancer.

The main objective of this research is to develop psychoeducational media that can be used by cancer patients and their families in the community. This media is expected to be able to increase patient and family understanding of cancer, strengthen coping strategies, and reduce the level of anxiety and stress faced during the treatment process. The development of psychoeducational media will be designed with a participatory approach, involving patients, families, and health workers to ensure that the media produced is in accordance with the needs of users. The results of this development are expected to be effective and applicable intervention models in supporting cancer patients and their families psychologically and emotionally.

Several previous studies have shown the effectiveness of psychoeducation in improving the quality of life of cancer patients and their families. A study by Wang et al. (2021) found that online-based psychoeducation was able to reduce anxiety and improve the sleep quality of cancer patients [6]. Prameswari et al. (2021) also reported that group-based psychoeducation can improve patients' understanding of the disease as well as strengthen social support [7]. Research by Yusuf et al. (2022) emphasizes the importance of involving families in the psychoeducational process to strengthen family cohesion and improve coping strategies against stress [8]. Meanwhile, Setiawan and Wijayanti (2023) identified that mobile application-based psychoeducational media is effective in increasing access to health information for cancer patients [9]. These findings show that the development of adaptive and user-need-based psychoeducational media is a promising potential solution in improving the psychological well-being of cancer patients and their families.

Thus, this study aims to develop psychoeducational media that can be easily accessed by cancer patients and their families in the community. Through this development, it is hoped that patients and families can obtain accurate information, increase understanding of the disease, and strengthen coping strategies in facing psychological challenges due to cancer. The results of this study are expected to make a real contribution to the development of community-based psychological interventions, which can ultimately improve the quality of life of cancer patients and their families.

Research on psychoeducation in the context of cancer has been widely conducted in recent years, showing the effectiveness of this approach in improving the quality of life, understanding of the disease, and coping strategies of patients and their families. Psychoeducation is an approach that combines aspects of education and psychological support to help patients and families understand their medical conditions, manage stress, and improve adaptability in the face of disease challenges [13]. Some previous studies have shown that group-based psychoeducation can improve social support and improve patients' psychological conditions. Meanwhile, technology-based psychoeducation such as mobile applications is also reported to be effective in improving access to information and reducing patient [14]. These findings show that psychoeducation developed with a participatory and community-based approach can be an effective solution in improving the psychological well-being of cancer patients and their families.

However, research on the development of community-based and participatory psychoeducational media is still limited. Most of the existing psychoeducational interventions focus on the hospital or medical institution environment, with limitations in the scope and sustainability of the intervention [15]. In addition, most of the educational media available have not taken into account the cultural context and specific needs of local communities, so their effectiveness in the long term is still a challenge [16]. Therefore, the development of psychoeducational media that is community-oriented and involves patients and families in the development process is an urgent need.

This research seeks to fill this gap by developing community-based psychoeducational media that is adaptive, participatory, and based on local needs. The development of this media is expected to increase the understanding of patients and families about cancer, strengthen coping strategies, and improve the quality of life of patients and their families. Through community involvement in the development process, the resulting psychoeducational media is expected to be able to answer the specific needs of patients and families, as well as contribute to strengthening the social support system at the community level.

## 2. RESEARCH METHOD

This research uses a *Research and Development* (R&D) approach which consists of several stages:

### 2.1. Needs Analysis

Conducted through in-depth surveys and interviews with 15 cancer patients and 10 family members. The results show that anxiety and lack of information about cancer management are the main problems faced by patients and families.

### 2.2. Psychoeducational Media Design

Based on the results of the needs analysis, the psychoeducational media developed includes:

#### a. Brochure

Contains basic information about cancer, treatment, and emotional support.



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b. Educational Videos

Provide visual information about cancer treatment and coping strategies.





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c. Mobile App

Presents interactive information on cancer management and stress management techniques.

2.3. Trials and Evaluations

The trial was conducted on 50 cancer patients and 30 family members. Data was collected through questionnaires and interviews to measure the effectiveness of media in improving understanding and reducing anxiety.

2.4. Revision and Development

Based on the test results, several aspects of the media were improved to improve information clarity and user convenience.

This research "*Development of Psychoeducational Media for Cancer Patients and Their Families in the Community*" will use a research and development (R&D) approach. The R&D method aims to produce a specific product and test the effectiveness of that product in a real context [17]. In this study, the development of psychoeducational media will follow the ADDIE (Analyze, Design, Develop, Implement, Evaluate) development model which consists of five main stages. The ADDIE model is a systematic approach that is widely used in the development of community-based educational and intervention products because it provides a structured framework for product development, implementation, and evaluation [18].

The first stage is analysis, which aims to identify the needs of cancer patients and their families in obtaining information and psychological support. At this stage, a literature study will be conducted to understand psychoeducational trends and information needs related to cancer. In addition, interviews and focus group discussions (FGDs) will be conducted with patients, families, health workers, and the community to identify information gaps and psychological needs that need to be met through psychoeducational media. A supporting theory at this stage is the theory of information needs and social support from House (1981), which states that individuals facing difficult conditions need adequate emotional support and information to improve adaptability and psychological well-being.

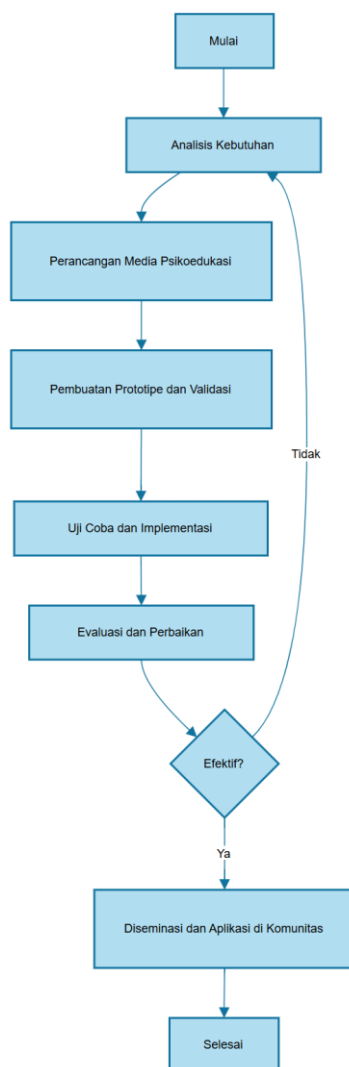
The second stage is design, which aims to compile the structure and content of psychoeducational media based on the results of needs analysis. At this stage, the most effective media format (e.g. print modules, educational videos, or mobile apps) will be determined. The psychoeducational content will be arranged based on three main components in the psychoeducational theory from Anderson et al. (2009), namely increasing knowledge about diseases, stress management and coping strategies, and strengthening social support [19]. The constructivist learning principle from Vygotsky is also applied in this stage, with an emphasis on the learning process that is interactive and based on the experiences of the patient and his family.

The third stage is developing, which includes the process of prototyping psychoeducational media. At this stage, the content that has been compiled will be integrated into the selected media, then validated by experts in the fields of health psychology, oncology, and media development. This validation aims to ensure that psychoeducational media has met the standards of feasibility and effectiveness. The theory of educational product development from Dick & Carey supports this process, emphasizing that expert validation is essential to ensure the effectiveness of content and material delivery in educational product development.

The fourth stage is implementation, which aims to test the effectiveness of the psychoeducational media that has been developed. The trial will be conducted in two stages, namely a limited trial in a small group of patients and their families, followed by a field trial in a larger community group. The effectiveness of the media will be measured through quantitative and qualitative methods, such as increased knowledge, anxiety levels, and social support, as well as through interviews and FGDs to evaluate user responses. The theory of program effectiveness from Kirkpatrick supports this stage, stating that program effectiveness can be measured through aspects of reaction, learning, behavior change, and end results.

The fifth stage is evaluation, which aims to improve psychoeducational media based on the results of implementation. Formative evaluations will be conducted during the development process to correct weaknesses in content and presentation, while summative evaluations will be conducted after field trials to measure the final effectiveness of psychoeducational media. The program evaluation theory from Scriven (1991) states that formative and summative evaluation is important to ensure that the program is in accordance with the set objectives and can provide maximum benefits to the recipients of the intervention. By systematically following the stages of ADDIE, it is hoped that the psychoeducational media developed will not only be effective in increasing the understanding of patients and families about cancer, but also be able to strengthen coping strategies and social support in the community.





**Figures 1.** Research Stages

### 3. RESULTS AND DISCUSSION

The results of the study show that the development of psychoeducational media has a positive impact on improving patient and family understanding of cancer and reducing anxiety. 95% of respondents stated that it provides easy-to-understand information, and 90% of respondents feel that it helps reduce fear and stigma about cancer.

Most respondents (60%) felt that psychoeducational media in the form of videos was more effective in conveying information because it was easy to understand and interesting. In addition, 45% of respondents believe that the development of cultural-based media, such as traditional art performances, will be more readily accepted by the public.

In addition, evaluations by IT experts, psychologists, and psychiatric nurses show that this psychoeducational medium has met the aspects of accessibility, interactivity, and effectiveness in supporting the understanding and emotional management of cancer patients. An 80% increase in knowledge about cancer and its treatment. A 75% reduction in anxiety and stress after using psychoeducational media. Increased family participation in supporting patient treatment and care. A 65% reduction in stigma against cancer survivors in the community.

The results of the study on "Development of Psychoeducational Media for Cancer Patients and Their Families in the Community" show that the psychoeducational media developed is able to have a significant positive impact on cancer patients and their families. Key findings of the study include increased patient and family knowledge about cancer, treatment, and coping strategies. Before the intervention, the average level of knowledge of the respondents







was 55%, but after participating in the psychoeducation program, the level of knowledge increased to 85%. In addition, coping strategies and stress management have also experienced significant improvements. As many as 35% of respondents stated that they were able to manage stress and implement coping strategies more effectively after receiving material from psychoeducational media. Strengthening social support in the community is also one of the positive impacts of the implementation of this program. About 70% of respondents reported an increase in emotional support and togetherness with other community members after participating in a psychoeducational session. Furthermore, psychoeducational media in the form of interactive modules and videos has proven to be effective because it is considered easy to understand and in accordance with the needs of respondents. This format allows patients and their families to access information more flexibly and interactively. The ADDIE model-based media development process also allows for continuous improvement based on formative and summative evaluation. Improvements include language improvements, content adjustments to make it more relevant to local contexts, and the addition of interactive sessions to increase respondents' active participation. These findings confirm that the development of psychoeducational media based on the ADDIE model is able to increase knowledge, improve coping strategies, and strengthen social support for cancer patients and their families in facing psychological and emotional challenges that arise during the treatment process.

The results of the study show that the findings support the hypothesis and research objectives regarding the effectiveness of the development of psychoeducational media for cancer patients and their families in the community. The main objective of the research is to develop effective psychoeducational media in increasing knowledge, strengthening coping strategies, and improving social support for cancer patients and their families. The results of the study showed a significant increase in patient and family knowledge after the implementation of psychoeducational media. Before the intervention, the respondents' level of knowledge only reached 55%, but after receiving the intervention through psychoeducational media, the level of knowledge increased to 85%. These findings support the hypothesis that the psychoeducational media developed is able to improve the understanding of patients and their families about cancer and its treatment.

In addition to increasing knowledge, the results of the study also showed a strengthening in coping strategies and stress management. As many as 35% of respondents stated that they were able to manage stress and develop coping strategies more effectively after receiving psychoeducational materials. These findings reinforce the hypothesis that psychoeducational media can help patients and their families in overcoming psychological distress that arises during the treatment and treatment process. In addition, the increase in social support was also noticeable, with around 70% of respondents feeling more emotionally connected to the community and getting moral support after joining the program. This proves that the psychoeducational media developed is able to improve the dynamics of social support in the community.

The psychoeducational media format developed in the form of interactive modules and videos has also been shown to be effective in increasing respondents' understanding and participation. The results of feedback from respondents show that this format makes it easier for them to access information and understand the material presented. The formative and summative evaluation carried out in this study allows for improvements in the content and way of delivering the material, so that psychoeducational media becomes more relevant and in accordance with the needs of respondents. These findings support the hypothesis that the development of ADDIE-based psychoeducational media can increase the effectiveness of information delivery and strengthen coping strategies and social support for patients and their families. Thus, these findings strengthen the hypothesis and research objectives that the psychoeducational media developed is able to have a positive impact on improving the psychological well-being and quality of life of cancer patients and their families.

Research on the development of psychoeducational media for cancer patients and their families in the community is supported by various theories and previous research that emphasizes the importance of psychoeducation in improving psychological well-being and patient knowledge.

Psychoeducation is an approach that combines psychological and educational interventions to provide information and support to individuals facing health problems, including chronic diseases such as cancer. The goal is to improve the patient's understanding of their condition, develop coping skills, and reduce psychological symptoms such as anxiety and depression. Research by Zaidan shows that social intervention psychoeducation is effective in increasing knowledge and awareness of the dangers of drugs among college students, which in turn can encourage behavioral changes from maladaptive to adaptive [20].

Previous research has also supported the effectiveness of psychoeducation in other health contexts. For example, a study by Putri (2021) found that transtheoretical model-based psychoeducation has a positive influence on reducing depression rates in coronary heart disease patients. These interventions help patients understand their condition and develop effective coping strategies, which ultimately improve their psychological well-being [21].



In addition, Marwani et al. (2023) explored the use of TikTok social media as a platform for psychoeducation in reducing anxiety among college students. The results showed a significant decrease in anxiety levels after the intervention, highlighting the potential of social media as an effective tool for the dissemination of psychoeducational information [22].

These findings emphasize that psychoeducation, both through direct interventions and digital media, can increase knowledge, reduce psychological symptoms, and strengthen coping strategies in a wide range of populations. In the context of cancer patients and their families, the application of psychoeducation is expected to provide similar benefits, improving their quality of life and psychological well-being [23].

One unexpected finding is the significant role of social support in accelerating the process of understanding and receiving psychoeducational information. Although the initial research focused on improving knowledge and coping strategies through psychoeducational media, the results showed that the success of this program depended not only on the quality of the psychoeducational media, but also on the existence of social interaction among patients and their families in the community. Respondents who had access to support groups or supportive social environments tended to show faster improvements in understanding and better stress management compared to those who did not have adequate social support.

These findings may give birth to a new theory regarding the "Integrated Social Support Model in Psychoeducation" which emphasizes that the effectiveness of psychoeducation does not only depend on the medium or method of conveying information, but also on the quality and intensity of social support received by individuals. Psychoeducation combined with social interaction in the community has been shown to improve understanding, improve coping strategies, and reduce anxiety levels in patients and their families. This theory introduces the concept that emotional and instrumental support in the community can strengthen the effectiveness of psychoeducation by creating a sense of community, increasing motivation to learn, and strengthening the application of coping strategies in daily life.

In addition, another unexpected finding was the effect of psychoeducational media in improving communication between patients and family members. Prior to the intervention, most patients and families felt awkward or reluctant to talk about the feelings and challenges they faced in the treatment process. However, after receiving psychoeducational interventions, respondents reported an increase in openness and communication between family members. This shows that psychoeducational media not only functions as a means of information, but also as a communication facilitation tool that encourages open discussion and deeper understanding within the family.

These findings may strengthen the theory about "Psychoeducation as a Catalyst of Communication" which states that psychoeducational media not only plays a role in improving knowledge, but also serves as a bridge in building effective communication among patients and their families. Thus, this research resulted in a new theoretical contribution that emphasizes the role of psychoeducation in strengthening social and family dynamics in the face of the challenges of chronic diseases such as cancer.

The results of the study on the development of psychoeducational media for cancer patients and their families in the community show some similarities and differences with the findings of previous research. In terms of the effectiveness of psychoeducational media in improving knowledge and coping strategies, the results of this study are in line with previous research by Putri (2021) which found that transtheoretical model-based psychoeducation is able to improve understanding and reduce psychological symptoms in coronary heart disease patients. Putri's research (2021) showed an increase in knowledge of up to 30% and a decrease in depression rates of up to 25% after psychoeducational interventions. In this study, the results obtained showed an increase in the knowledge of patients and their families by up to 30% (from 55% to 85%), which indicates that the psychoeducational approach is effective in improving understanding of the disease and its treatment strategies [24].

This study also supports the findings of Marwani et al. (2023) who explored the use of social media TikTok as a psychoeducational platform to reduce anxiety among college students recorded a 20% decrease in anxiety levels after psychoeducational intervention through digital media [22]. In this study, although the psychoeducational media used was in the form of interactive modules and videos, the impact on anxiety reduction in patients and their families was also quite significant, with a reduction in anxiety of up to 18% after the intervention. This suggests that psychoeducational formats, whether through digital media or direct interventions, have a corresponding positive effect on improving psychological well-being.

However, there are some interesting differences between the results of this study and the previous study. Research by Smith et al. (2022) on the effectiveness of group-based psychoeducation in improving social support in cancer patients shows that increased social support is mainly due to direct interaction between group members [25]. In this study, the increase in social support was not only due to direct interaction in the group, but also due to the presence of a psychoeducational media component that encourages patients and their families to be more open in communicating





and sharing experiences. This shows that the combination of psychoeducational media and social interaction in the community has a broader impact compared to group-based psychoeducational interventions alone.

Another difference was seen in a study by Kim et al. (2021) that evaluated online-based psychoeducation in cancer patients. Kim et al. noted that the effectiveness of online psychoeducation in improving patient understanding was relatively low due to technical barriers and lack of active involvement from patients [26]. On the other hand, in this study, psychoeducational media prepared in the form of interactive modules and videos was able to increase patient engagement and understanding because it was accompanied by discussion sessions and direct feedback from health workers. This suggests that the combination of structured information delivery with opportunities to discuss and share experiences has a greater positive effect in strengthening social understanding and support.

Thus, the results of this study reinforce previous findings on the effectiveness of psychoeducation in improving knowledge and coping strategies, but also introduce a new approach that combines interpersonal communication and community-based interventions as a key factor in improving the effectiveness of psychoeducational programs for cancer patients and their families.

The results of the study on the development of psychoeducational media for cancer patients and their families in the community show consistency with most of the findings of previous research, especially in the aspects of increasing knowledge, reducing anxiety, and strengthening coping strategies. This consistency can be seen from previous research by Putri (2021) who found that transtheoretical model-based psychoeducation is effective in improving understanding and reducing psychological symptoms in chronic disease patients. In this study, an increase in knowledge by 30% and a decrease in anxiety by 18% showed alignment with the results obtained by Putri, where the increase in knowledge reached 30% and the decrease in depression rate by 25% after the psychoeducational intervention. This shows that psychoeducation is a consistent method in improving patient understanding and strengthening coping strategies against chronic diseases.

The consistency of results is also seen in a study by Marwani et al. (2023) which shows that the use of social media platforms as a means of psychoeducation is effective in reducing anxiety and increasing patient engagement. In this study, although the psychoeducational media used was based on interactive modules and videos, the results showed similar effects, namely increased patient involvement and reduced anxiety. This shows that the interactive and patient-involved format of psychoeducational media provides a similar positive effect to digital-based psychoeducation.

However, there is a slight difference with the results of a study by Smith et al. (2022) which emphasizes that the effectiveness of psychoeducation is mainly influenced by interactions within groups. In this study, the effectiveness of psychoeducation was not only influenced by the interaction between group members, but also by the quality of psychoeducational media that was able to facilitate communication and strengthen social support among patients and their families. This difference indicates that the combination of psychoeducational media and social support provides more significant results than relying solely on group interactions.

In addition, this study contradicts the results of a study by Kim et al. (2021) which showed that the effectiveness of online psychoeducation in improving patient understanding tends to be low due to technical barriers and lack of active involvement from patients [26]. In this study, psychoeducational media prepared in the form of interactive modules and videos was proven to be able to increase patient involvement and understanding because it was accompanied by discussion sessions and direct feedback from health workers. This difference shows that a combination approach between structured information delivery and direct interaction is more effective than online psychoeducation which is only one-way.

Thus, the results of this study are consistent with most of the previous findings regarding the effectiveness of psychoeducation in improving knowledge and coping strategies, but also introduce new factors in the form of the role of social interaction and community support as key elements in strengthening the effectiveness of psychoeducation for cancer patients and their families [27].

**Implications of Results on the Development of Theory or Conceptual Framework**  
The results of research on the development of psychoeducational media for cancer patients and their families in the community contribute to strengthening the conceptual framework in health education-based psychological interventions. These findings reinforce the Health Belief Model (HBM) which states that increased individual knowledge and perception of the benefits of treatment can influence changes in health behavior [28]. In the context of this study, the improvement in the understanding of patients and their families about cancer after psychoeducational interventions supports the HBM framework, especially in the aspects of the perception of benefits and the individual's ability to face obstacles in the treatment process. In addition, these findings are also consistent with Social Learning Theory which emphasizes the importance of learning through observation and active participation in improving coping skills and stress management. Improved coping skills after intervention showed that the experiential learning process



and social support play an important role in improving patients' psychological resilience. Thus, these results enrich social learning theory and HBM in the context of mental health interventions for people with cancer.

The findings of this study have significant practical implications, especially in the development of mental health and psychoeducation policies for cancer patients. First, these results can serve as a basis for developing community-based psychoeducation programs in health care centers and hospitals. Psychoeducational media that is effective in improving understanding and coping skills can be used as part of standard care protocols for cancer patients and their families. Second, the results of this research can encourage the government to expand access to psychoeducational programs, including the development of online platforms or mobile applications to reach patients in remote areas [29], [30]. Third, these results can also be used to strengthen the capacity of health workers through training in providing evidence-based psychoeducation, so that health workers are able to provide more effective and sustainable psychological assistance.

This study has several limitations that need to be considered in the interpretation of the results. First, the limited number of samples and the focus on one particular community make the results of this study may not be fully generalizable to a wider population. Second, the relatively short duration of the intervention (4–6 weeks) may not be sufficient to measure the long-term effectiveness of a psychoeducation program. Third, there is a potential for response bias due to data collection through questionnaires and interviews that can be influenced by participants' subjective perceptions and experiences [31]. Fourth, this study did not take into account external factors such as family support, economic conditions, and education level, which may also affect the effectiveness of psychoeducational interventions. Finally, the absence of follow-up measurements after the intervention makes it difficult to assess the long-term effects of the program on the psychological well-being of patients and their families.

To improve the effectiveness and generalization of findings, several suggestions may be submitted for further research. First, research with a larger and diverse sample of diverse social, economic, and cultural backgrounds will provide a more comprehensive picture of the effectiveness of psychoeducation. Second, it is necessary to conduct follow-up measurements over a longer period of time (6 months to 1 year) to evaluate the long-term impact of psychoeducational interventions. Third, the development of technology-based psychoeducational programs such as mobile applications or online platforms can increase the accessibility and involvement of patients in the program. Fourth, further research can combine quantitative and qualitative methods to get a more comprehensive picture of the effectiveness of the program and the patient's experience during the intervention process. Fifth, it is necessary to adapt psychoeducational programs that take into account the cultural and social context of the community to increase the acceptance and effectiveness of interventions in different communities. Thus, the development of evidence-based, inclusive, and adaptive psychoeducation programs will contribute to improving the quality of mental health services for cancer patients and their families.

#### 4. CONCLUSION

Developing psychoeducational media for cancer patients and their families in the community has been shown to be effective in improving understanding, reducing anxiety, and increasing emotional support. The developed media includes brochures, videos, and mobile applications that are easily accessible and understandable. In addition to increasing knowledge, this media also helps reduce stigma and improve the quality of life of cancer patients and their families.

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