The Effects Of Health Promotion Through Animation Video In Reducing Anxiety Among Hypertension Patients: A Literature Review

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Abstract

Introduction: Anxiety is a state of unease or apprehension that arises from the expectation of potential harm, frequently without a clear or identifiable cause. An individual undergoing anxiety might induce a rise in blood pressure. Anxiety exacerbates hypertension by causing vasoconstriction, resulting in elevated blood pressure. Regarding the correlation between anxiety and hypertension, it is crucial to address anxiety in individuals with hypertension. There are multiple methods available to address this anxiety, including both pharmaceutical and non-pharmacological approaches. Material and Methods: This study is a review of existing literature. The researchers aimed to locate scholarly literature about the use of animated movies as a means of alleviating anxiety in individuals diagnosed with hypertension. Articles about the specified theme were chosen from 2018 to 2023 using electronic databases such as Science Direct, PubMed, and Google Scholar and open knowledge maps during the article search. The researchers employed the PRISMA methodology to analyze the literature review studies. Results: 174 articles were chosen using the keywords Health Promotion, Animation Video, Anxiety, and Hypertension. The research underwent a comprehensive review encompassing its aims, samples, methods, and results. Based on the literature review findings, there needs to be more participants or samples that align with the focus of this study. Researchers did not discover any instances of anxiousness in individuals with hypertension through the examination of samples. However, researchers conducted studies on various topics, including the impact of using animated videos to promote health in reducing anxiety among postpartum patients, preoperative anxiety in children, and hypertension. These findings are presented in Table 1. Nevertheless, scholars might engage in
discussions regarding the impacts of animated videos. The researchers selected and evaluated only ten publications despite their lack of relevance to the research area of this literature review.

**Conclusion:** Out of the 10 articles examined, many employed animated videos as interventions. However, researchers did not discover any studies specifically focused on investigating the impact of using animated videos for health promotion in reducing anxiety among hypertensive patients. The researchers discovered an independent subject. Consequently, researching this topic can contribute innovatively to future investigations.

**Keywords:** Effects, Health Promotion, Animation Video, Anxiety, Hypertension

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1. Introduction

An individual's apprehension regarding the introduction of novel issues in individuals with hypertension can lead to mental and emotional disturbances, such as worry. Anxiety is a state of unease, apprehension, or intense fear that arises from the expectation of potential harm, typically without a clear or identifiable cause (Susanti et al., 2023). Untreated chronic anxiety can progressively harm the body to different degrees, depending on the severity of anxiety and an individual's resilience. Emotional disturbances such as anxiety and stress have the potential to underlie or worsen physical ailments (April, 2018).

An individual who suffers from anxiety can induce a rise in blood pressure. During moments of anxiety, the secretion of adrenaline hormone intensifies, leading to an accelerated heart rate and subsequently elevated blood pressure. Anxiety exacerbates hypertension by causing vasoconstriction, leading to an increase in blood pressure (Angela, 2017). According to Sukma's (2018) research, over 75% of individuals with hypertension experience mild anxiety. The findings of Darkay (2022) research indicate that a majority of respondents, precisely 37 individuals (61.7%), reported experiencing anxiousness. The anxiety levels in patients with hypertension can lead to modest muscle tension, slight restlessness, heightened awareness, and a touch of impatience, all of which can negatively impact the health of hypertensive individuals.

According to the National Institute of Health in the United States, stress and anxiety are responsible for causing and worsening 90% of health issues. According to this hypothesis, anxiety can give rise to various problems in individuals, including but not limited to headaches, back discomfort, difficulty breathing, stomach ulcers, and hypertension. Anxiety is a contributing factor that raises the likelihood of developing hypertension. An individual experiencing anxiety is at a fourfold increased risk of developing hypertension. Hypertension, often known as high blood pressure, is characterized by a rise in systolic blood pressure over 140 mmHg and diastolic blood
pressure above 90 mmHg, as measured twice with a five-minute interval. At the same time, the individual is in a condition of sufficient rest or tranquility.

Hypertension is a condition that can impact individuals of all ages, encompassing both the young and the elderly. Hypertension, commonly known as the silent killer, is a potentially fatal condition. The prevalence of hypertension is steadily rising on an annual basis. By 2025, it is projected that the number of individuals afflicted with hypertension will reach 1.5 billion. According to the Ministry of Health of the Republic of Indonesia (2019), over 9.4 million individuals perish annually. Hypertension primarily afflicts the elderly, although adolescents and adults can also experience this condition (Arum, 2019).

According to the National Institute of Health in the United States, stress and worry are responsible for 90% of health problems as causes and aggravating factors. According to this hypothesis, anxiety can give rise to various ailments in individuals, including but not limited to headaches, backaches, difficulty breathing, stomach ulcers, and hypertension. Anxiety induces and exacerbates hypertension due to the constriction of blood vessels and subsequent elevation of blood pressure (Angela, 2017).

The findings of a qualitative study conducted by Pan et al (2015) in Shanghai, People’s Republic of China, as cited in the NCBI, revealed a correlation between anxiety and hypertension. Similarly, quoted in the International Journal of Hypertension demonstrated that anxiety disorders are linked to a higher likelihood of developing hypertension. Patients with chronic diseases such as hypertension, stroke, diabetes, cancer, and chronic pain syndromes are seeing a growing prevalence of anxiety.

Regarding the correlation between anxiety and hypertension, it is crucial to address anxiety in people with hypertension. There are various methods available to address this anxiety, including both pharmaceutical and non-pharmacological approaches. Healthcare professionals are crucial in delivering care, particularly in Health Promotion. An educational approach that can be employed via electronic platforms is using animated videos and analyzing the Efficacy of Animated Videos in Alleviating Anxiety among Hypertensive Patients. This paradigm has been employed in numerous clinical
investigations to elucidate the advantages of therapies based on technology. Various educational videos have been created for diseases like diabetes, cancer, hypertension, and asthma (Lim et al., 2021).

Video animation is a multimedia format that integrates audio and visual elements to captivate viewers and provide a comprehensive depiction of objects, facilitating comprehension of complex subject matter. The animated video material is created based on the required analytical results. An animated video has been selected as a medium to communicate anxiety and hypertension, as it can capture attention and effectively address these topics.

2. Research Method

Research Design, Setting, and Sample
This study was conducted as a literature review. Articles aligning with the designated theme were chosen from 2018 to 2023. The inclusion criteria consisted of full-text papers that were readily accessible and utilized a quasi-experiment or experimental research approach. The exclusion criteria encompassed conference papers, chapters, editorials, and unopened access materials.

Data Collection
The data sources utilized in this study consisted of papers obtained from the electronic databases Science Direct, PubMed, and Google Scholar and open knowledge maps during article searches. The researchers employed a search approach in each database with the keywords Health Promotion, Animation Video, Anxiety, and Hypertension.

Analysis Data
The researchers employed the PRISMA approach, which adheres to a standardized study methodology (Haddaway et al., 2022), as illustrated in Figure 1.

3. Results And Discussions

a. Result
174 articles were selected with the keywords Health Promotion, Animation Video, Anxiety, and Hypertension. The research was fully reviewed regarding objectives, samples, methods, and results. From the results of the literature review, no subjects or samples match this study's theme. Researchers did not find samples that experienced anxiety in people with hypertension. However, researchers found research on a separate matter, namely The Effects Of Health Promotion Through Animation Video In Reducing Anxiety in Postpartum Patients, Preoperative Anxiety in Children and others, and The Effects Of Health Promotion Through Animation Video In Hypertension, which can be seen in Table 1. However, researchers can discuss the effects of animated videos here. Researchers only took 10 articles that were analyzed to the end even though there was no suitability of the subject under study by the research theme of this literature review. The selection process for this research is presented in Figure 1.
Table 1. Result of Article Analysis

<table>
<thead>
<tr>
<th>Author</th>
<th>Aims</th>
<th>Sample</th>
<th>Method</th>
<th>Result</th>
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<tbody>
<tr>
<td>(Aini &amp; Sudiyat, 2021)</td>
<td>This study aimed to create video health promotion media specifically focused on medication adherence in patients with hypertension.</td>
<td>18 patients with hypertension</td>
<td>This study utilizes a mixed methods approach using a sequential exploratory mixed methods design. This research phase commences with exploring the requirements for health promotion video media involving five informants. A prototype of a health</td>
<td>The initial stage, which involved validation by material experts, yielded a feasibility rating of 72%. In the second stage, the rating increased to 86% and was classified as highly feasible by the material experts. The third stage involved validation through small-</td>
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<td>(Listari et al., 2022)</td>
<td>Analyzing the effect of animated videos on preoperative anxiety levels in preschool children.</td>
<td>children aged 3-6 years totaling 40 respondents</td>
<td>promotion media is created based on the three stages of the ADDIE development paradigm, namely analysis, design, and development, using 18 hypertensive patient subjects.</td>
<td>The findings of the Wilcoxon signed rank test indicate that animated movies influence the levels of preoperative anxiety in preschool children. The p-value obtained from this test is 0.000, less than the significance level of α (0.05).</td>
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<td>(Muninggar et al., 2023)</td>
<td>Create animated video content on the reduced sodium diet for individuals with hypertension to provide educational material tailored explicitly to hypertensive patients.</td>
<td>10 respondents in hypertension</td>
<td>The research approach employed is Research and Development (RD), which consists of five distinct stages: analysis, design, development, implementation, and evaluation (ADDIE). The utilization of animated video media is viable for using as an educational tool for promoting reduced salt diet among hypertension patients.</td>
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<td>(Sunarti, 2020)</td>
<td>The objective of this study is to determine the impact of health education via animated movies on the anxiety levels of pre-menarche children between the ages of 10 and 12.</td>
<td>24 samples of children aged 10-12 years</td>
<td>This study employed a pre-experimental design, specifically a one-group pre-post-test design. The provision of health education with animated videos has a notable impact on the anxiety level of pre-menarche youngsters regarding their first menstruation, as evidenced by a p-value of 0.001. Utilizing animated movies for health education can enhance children's comprehension and engagement with menarche-related content, optimizing the supplied stimulus's effectiveness.</td>
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<td>(Oktavian i et al., 2023)</td>
<td>To assess the impact of educational animated videos on the</td>
<td>Sample of 78 respondents</td>
<td>The research employed a quasi-experimental method with a one-group pretest-posttest trial, resulting in a rating of 91% and also classified as highly feasible.</td>
<td>The p-value for the change in respondents' knowledge before and after being</td>
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<td>Source</td>
<td>Objective</td>
<td>Participants</td>
<td>Design</td>
<td>Findings</td>
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<td>(Susanty et al., 2023)</td>
<td>The objective is to create animated educational movies focusing on preventing and managing COVID-19. The aim is to assess these videos' feasibility and initial effectiveness in enhancing knowledge and reducing anxiety levels among the senior population.</td>
<td>63 male and female participants aged &gt;60</td>
<td>The research employed a quasi-experimental method, specifically a one-group pretest-posttest research design with a control group.</td>
<td>Exposed to animated video media is statistically significant (p=0.000). Animated videos can effectively convey information by visually representing the described content.</td>
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<td>(Turgut &amp; Özgür, 2021)</td>
<td>To examine the impact of pre-procedure animated movies and music on blood pressure, pain scores, anxiety scores, and pulse rate in patients undergoing biopsy.</td>
<td>100 Patient</td>
<td>The research methodology employed in this study is experimental, utilizing a one-group pretest-posttest with a control group research design.</td>
<td>Patients’ anxiety, pain scores, blood pressure, and pulse rate were all positively impacted by watching animated videos and listening to music.</td>
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<td>(Pertiwi et al., 2021)</td>
<td>This study aims to create audiovisual health education media to assist hypertension patients in managing their condition independently.</td>
<td>10 Respondents with hypertension</td>
<td>This study employs the R &amp; D (Research and Development) methodology, utilizing the ADDIE technique approach.</td>
<td>The feasibility of using audiovisual health education media for self-management of hypertension has been established. Furthermore, as evaluated by experts and respondents, this audiovisual health education is easily comprehensible in terms of its content, materials, and presentation elements.</td>
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<td>(Sutarso et al., 2022)</td>
<td>The objective of this study is to examine the impact of imparting knowledge about COVID-19 prevention methods on mitigating the anxiety levels experienced by women in the postpartum period.</td>
<td>A total of 40 women in the postpartum period</td>
<td>This research employs a quantitative approach utilizing the Quasi Experiment method with a non-equivalent control group design.</td>
<td>The data analysis using the Wilcoxon Test yielded a p-value of 0.000. The Paired T-Test yielded a p-value of 0.004, indicating the efficiency of the intervention. In conclusion, the null hypothesis (Ho) is rejected, and the alternative hypothesis (Ha) is supported. This indicates that health education via audio-visual medium to minimize COVID-19 transmission can effectively reduce postpartum women's anxiety levels.</td>
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<td>(Wang et al., 2022)</td>
<td>This paper examines the impact of preoperative health education, delivered through spoken, recorded, or animated videos, on self-reported levels of postoperative pain and anxiety in patients with femur fractures.</td>
<td>Ninety cases of femoral fracture</td>
<td>Health education is conducted through verbal communication, video recordings, or animated movies. These methods are separated into three groups, each consisting of 30 samples.</td>
<td>The study revealed a significant reduction in postoperative anxiety levels among patients with femoral fractures following the viewing of animated videos. The utilization of animated videos proved to be more impactful in diminishing postoperative anxiety levels among patients with femoral fractures. The utilization of animated movies, compared to the videotape and oral instruction groups, enhanced the acquisition of knowledge about surgery and recovery, bolstered patients' ability to cope, and reduced levels of postoperative anxiety and pain.</td>
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b. Discussion

The study conducted by Aini & Sudiyat (2021) investigated a group of 18 patients with hypertension. This research employs a mixed method design, precisely an exploratory
sequential mixed method technique. The research commenced by investigating the requirements of the medium of video health promotion through consultations with five experts. The health promotion media prototype is created using the ADDIE development model's three stages: analysis, design, and development. The prototype is tested on 18 hypertensive patients. The study determined that the animated film presenting the results of video media validation was a viable tool for promoting adherence to hypertension medication among hypertensive patients. Audio-visual video media is an intermediary medium for teaching content, facilitating effective learning processes by capturing attention, and providing an enjoyable experience (Ningsih et al., 2023).

Listari et al. (2022) conducted a study to examine the impact of animated videos on preoperative anxiety levels in preschool children, namely those aged 3-6 years. The study included a total of 40 participants. Utilizing quantitative approaches, this study employs a pre-experimental type one group pretest-posttest experimental design. The study revealed a significant impact of animated videos on reducing preoperative anxiety levels in preschool children. This was confirmed by the Wilcoxon signed rank test, which yielded a p-value of 0.000, indicating a robust statistical significance at a significance level of α (0.05). According to prior research conducted by Alivian et al. (2018), non-pharmacological therapy in the form of health education has been found to effectively decrease anxiety levels in patients before undergoing surgery. Animated videos can engage two human sensory receptors, specifically the visual and auditory senses (Ariani et al., 2021). Furthermore, non-pharmacological therapy, in the form of health education, elucidates the sequence of events that transpire before and during surgery while also imparting relaxing strategies. Health education is conveyed through static images and dynamic audio-visuals that incorporate moving images along with music and sound (Nugroho et al., 2020).

The study conducted by (Muninggar et al., 2023) aimed to create animated video media for educating hypertensive patients about a low-salt diet. The research method used was Research and Development (RD), which involved five stages: analysis, design,
development, implementation, and evaluation (ADDIE). The findings indicate that the animated video media is suitable for educating hypertensive patients about low-salt diets. Ningsih et al (2023) assert that video is a multimedia format that integrates audio, visual, and animation elements to convey a message and possesses inherent allure, potentially serving as a persuasive tool for recipients.

In her study, Sunarti (2020) researched the impact of health education via animated movies on the anxiety levels of pre-menarche children between the ages of 10 and 12. The study used a sample of 24 participants and employed a pre-experimental design with a one-group pre-post-test design. The results demonstrated a notable correlation between the delivery of health education through animated movies and the anxiety level of pre-menarche children regarding their first menstruation, with a p-value of 0.001. Utilizing animated movies for health education can enhance children's comprehension and engagement with menarche-related content. This approach is more impactful as it engages auditory and visual senses, incorporating moving images on the screen. Hendriani's (2019) research demonstrates that utilizing audiovisual media for health education effectively enhances knowledge and alleviates anxiety among adolescents undergoing menarche.

Oktaviani et al (2023) did a quasi-experimental study to investigate the impact of teaching via animated video media on hypertension prevention. The study involved 78 participants and employed a one-group pretest-posttest research design without a control group. The results indicated that the p-value for the participants' knowledge before and after exposure to animated video media was statistically significant (p=0.000). Animated videos can effectively elucidate the presented topic through visual representation. In a study by Susanty et al (2023) , animated educational videos were developed to avoid and handle COVID-19. The study aimed to assess the feasibility of these videos and their initial effectiveness in raising knowledge and anxiety levels among the elderly. The sample consisted of 63 people, both male and female, who were aged 60 or older. The before and post-test study findings demonstrated that exposure to the instructional video resulted in a significant increase in COVID-19 knowledge and a reduction in anxiety symptoms among
the intervention group, as compared to the control group. These results provide evidence for the efficacy of animated educational videos in enhancing understanding of COVID-19. Video media is a multimedia platform that presents visual and auditory content. This medium facilitates efficient learning in a brief period and enhances the retention and recall of information.

Similarly, Turgut & Özgür (2021) study aimed to investigate the effects of pre-procedure animated videos and music on blood pressure, pain scores, anxiety scores, and pulse rates in patients undergoing biopsy in 102 male patients undergoing prostate biopsy. The research method used in this study was experimental with a one-group pretest-posttest with a control group research design. The study found that watching animated videos and listening to music positively affected patients' anxiety, pain scores, blood pressure, and pulse rate. For a considerable period, music therapy has been employed in surgical procedures performed with local anesthesia, believing that it has a calming impact on patients. The study commenced with the hypothesis that viewing a comprehensive animated and musical movie illustrating the operation could potentially yield a favorable impact on anxiety scores and pain scores (Gökçek & Kaydu, 2020).

Pertiwi et al (2021) conducted a study to create audiovisual health education media for self-management of hypertension in 10 randomly selected individuals with hypertension. The study employed the Research and Development (R&D) methodology, utilizing the ADDIE approach. The findings indicated that the audiovisual health education media for self-management in hypertension was deemed viable as a health education tool. Furthermore, as evaluated by experts and respondents, this audiovisual health education is comprehensible in terms of its content, substance, and presentation features. According to Ambarwati et al (2021), the message conveyed through audiovisual media is more easily comprehended as it engages several senses, in contrast to relying on only one sense.

Sutarso et al (2022) aims to examine the impact of delivering COVID-19 transmission prevention information on reducing anxiety levels among postpartum women. The research involved 40 postpartum women, with 20 participants assigned to the
experimental group and 20 to the control group. The data analysis using the Wilcoxon Test yielded a p-value of 0.000. The Paired T-Test yielded a p-value of 0.004, indicating the efficiency of the intervention. In conclusion, the null hypothesis (Ho) is rejected, and the alternative hypothesis (Ha) is supported, indicating that health education via audio-visual medium to avoid the transfer of COVID-19 can effectively reduce postpartum women's anxiety levels.

In their study, Wang et al (2022) aimed to investigate the impact of preoperative health education, delivered orally, through video recordings, or via animated films, on self-reported levels of postoperative pain and anxiety in patients with femur fractures. The health education study used three modalities: spoken instruction, video recordings, and animated movies. Each modality was assigned to one of three groups, with each group consisting of 30 samples. The study revealed a significant reduction in postoperative anxiety levels among patients with femoral fractures following the viewing of animated videos. Animated videos had a more significant impact in reducing postoperative anxiety levels in patients with femur fractures. In contrast to the videotape and oral instruction groups, the utilization of animated movies enhanced the acquisition of surgical and recovery-related knowledge, bolstered patients' ability to manage stress, and diminished levels of postoperative anxiety and pain.

Animated video media in education can effectively elucidate complex concepts by visually representing the described material to enhance the efficacy of the Awareness, Interest, Desire, and Action process to augment knowledge. Education is conveying health messages to the community, group, or person, intending to enhance their understanding of health. Ultimately, this understanding is anticipated to influence their conduct.

4. Conclusion

A literature study was conducted to clarify the effectiveness of the effect of health promotion through animated videos. Of the 10 articles reviewed, animated videos can be used for health promotion on various samples or research subjects in conducting interventions. Returning to the initial objective of the research theme, researchers did not
find research with the theme The Effects Of Health Promotion Through Animation Video In Reducing Anxiety Among Hypertensive Patients. Researchers only find separate subjects. In this case, it can be concluded that research with this theme can be used as a novelty in further research conducted on subjects who experience anxiety and suffer from hypertension.

5. Compliance with ethical standards

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Disclosure of conflict of interest

Every researcher declares that there is no potential for a conflict of interest with any of the parties involved.

Statement of informed consent

The research being carried out is accompanied by a statement of consent that has been mutually agreed upon.

Reference


