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CREATING 2D ANIMATED CHARACTERS TO EXPLAIN HOW ANTIBIOTICS TREAT ACNE

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ABSTRACT

This study aims to enhance understanding and awareness of acne treatment strategies, specifically focusing on the employment of antibiotics within Thailand. To achieve this, the research introduces innovative character designs that symbolize the role of antibiotics in combating acne. Given the widespread recognition and prevalence of acne, utilizing characters for educational purposes offers an effective means to visually communicate treatment methods. The motivation behind this investigation stems from a desire to contribute valuable insights for individuals seeking information on acne management. The research commenced with an extensive review of existing literature and consultations with a dermatologist. This foundational work informed the creation of unique characters, ingeniously integrating personality traits with specific geometric shapes and colors that echo the properties of antibiotics used in acne treatment. These characters were then presented to dermatologists to gather critical feedback on the effectiveness and accuracy of the information portrayed through the motion graphics. This approach not only facilitates a deeper understanding of acne treatment options but also leverages the power of visual storytelling to educate and engage audiences.

Keywords: Acne/ Antibiotics/ Motion graphic/ 2D animation

INTRODUCTION

Antibiotics are currently a class of medications with high expense (Michael P. McNeil, 2023). Drugs known as antibiotics have the power to either kill or inhibit bacteria. One class of microscopic germs that are invisible to the human eye are called bacteria. Patients with bacterial infections in different body systems, like the respiratory system, are treated with antibiotics. digestive tract Skin infections, etc., will require time to treat in order to produce the desired therapeutic outcomes if antibiotics (antibacterial drugs) are used for bacterial infections. However, treating a patient with antibiotics will be ineffective if they have an infection caused by something other than bacteria. Furthermore, even though medications are used to treat illnesses, consumers should be cautious when using antibiotics. Because there are advantages and disadvantages to medicine. Drug resistance, or adverse effects that negatively impact a drug user's body due to incorrect drug use, is a result of patients using drugs without adequate knowledge about them (Kandhari, Rajat, 2024) . Additionally, general pharmacies sell medications based on the requirements of their customers. Furthermore, it was discovered that

the drug class with the highest number of drug allergies is antibiotics. As such, we need to educate one another on the proper use of antibiotics. To lessen the issue of improper antibiotic use.

Acne has numerous causes. However, abnormalities in the cell shedding in the hair follicle ducts are the most crucial factor. As a result, the fat congeals into lumps, or comedone. Occasionally, the fat lumps burst through the pores, causing skin cells and fat fragments to spread to the surrounding skin. Acne, redness, swelling, and inflammation are brought on by this. Bacteria are also present. Inflammation associated with acne is caused by the skin-dwelling *Propionibacterium acnes* (*P. acnes*) (Joseph McLaughlin, 2019). due to the chemicals, it secretes that cause redness and inflammation. and secretes enzymes that aid in the breakdown of fat blockages, producing fatty acids that cause inflammation. Treatment for acne Oral and topical medications are available. Many patients take medication in the hopes that it will quickly clear up their acne. In order to eradicate the bacteria that causes moderate to severe acne, oral antibiotics are used (*P. acnes*). However, taking medicine won't make acne go away in a couple of days. Usually, it takes at least three weeks to notice any effects, and it takes eight to nine weeks to get the full effects of the medication. Additionally, you will need to take the medication consistently to prevent new breakouts once your acne clears up. Extended periods of continuous medication use may have adverse effects on the body. A physician should write a prescription for it, and the patient should sign a release recognizing the risk of side effects. But there is concern that in Thailand these drugs can be purchased commonly without having to go through a doctor.

Numerous varieties of bacteria are pathogenic (Yuttana Sudjaroen, 2021). Guidelines for solving problems People's ignorance of medications and other facets of health care contributes to the inappropriate use of antibiotics (Nustha Kitprathaung, 2023). Therefore, increasing people's knowledge and comprehension is crucial. Motion graphics have been found to be the media that facilitates easy understanding of issues that require immediate attention (Orathai Chaiyo, 2021). In order to inform the public about the use of antibiotics in treating acne, the researcher created motion graphics media.

LITERATURE REVIEW

Prawit and Preeya (2005) Acne is the most prevalent sebaceous gland disease observed in clinical practice, and it affects teens and young adults heavily. However, according to data from the Institute of Dermatology, acne can develop in adults (senile comedones) or in newborns (acne neonatorum). At roughly 10% of all patients 33 percent of men and 67 percent of women acne is the second most common reason for them to visit a doctor. Acne typically first appears in women between the ages of 14 and 17 and in men between the ages of 16 and 19. It gets worse three to five years after it first appears and then goes away between the ages of 20 and 25. People with mild acne make up 85% of the population. Only 15 percent had severe acne. Michael P. McNeil (2023) Benzoyl peroxide (BPO), topical retinoids, and oral and topical antibiotics combined with BPO are the first-line treatments for the majority of patients with inflammatory, comedonal, or combination acne. 2, 5, 6 These are very potent agents that frequently produce a significant level of acne resolution. Additionally, studies show that 32.4% of patients with acne received a prescription for topical retinoids from nondermatologist

providers, while dermatologists only prescribed them for 58.8% of patients with acne. Sawitree Roopanont (2016) Motion graphics are graphic pieces that can be animated through arrangement or by creating motion for 2D drawings, much like in animated cartoons. These days, more and more presentation media are using motion graphics. due to the fact that it is easily communicated and understood.

OBJECTIVE

1. To dissect the ingredients of acne-treating antibiotics and utilize the results to create motion graphics.
2. To create motion graphic material regarding the treatment of acne with antibiotics.

METHODOLOGY

Creating a 2D Animation is divided into 3 major steps as follows:

1. Pre-Production

1.1 Develop Direction Concept: Formulating the narrative direction.

1.2 Mood Board: Setting the color tones and emotional aspects, character features, and font styles to be used.

1.3 Storyboard: Illustrating the storyline and mood board to visualize the movement of the entire narrative.

2. Production

2.1 Character Creation: Developing characters based on the concept and mood board as defined, starting with hand-drawing, and then digitally creating them in Adobe Illustrator.

2.2 Scene Creation: Constructing scenes based on the concept and mood board as defined, starting with hand-drawing, and then digitally creating them in Adobe Illustrator.

2.3 Animation: Animating the characters and scenes created in Adobe Illustrator using Adobe After Effects.

3. Postproduction

Editing: Integrating all files from Adobe After Effects according to the storyboard layout, and adding sound effects and background music using Adobe Premiere Pro.

Experts' assessment of the motion graphics design quality

1. Summarize the features of the design project.
2. The assessor gives the design work high marks.
3. The assessment is finished by the assessor.
4. Gather the completed assessment form.

RESULT

A study was carried out after the antibiotics used for treatment in Thailand were chosen. The drug's appearance in relation to character design Drawing the design and utilizing the hues of the Thai medication. and compose the tale you wish to tell in the following manner:

Figure 1 Image showing the character design process

Figure 2 The picture shows the process of creating characters in Adobe Illustrator

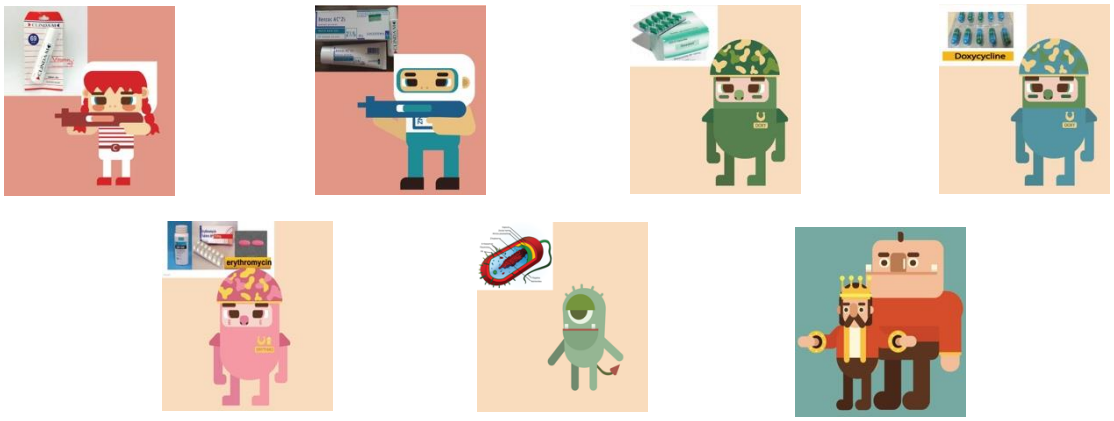


Figure 3 shows the process of laying out a scene in Adobe Illustrator

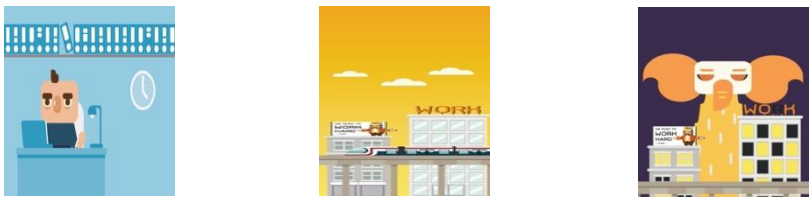
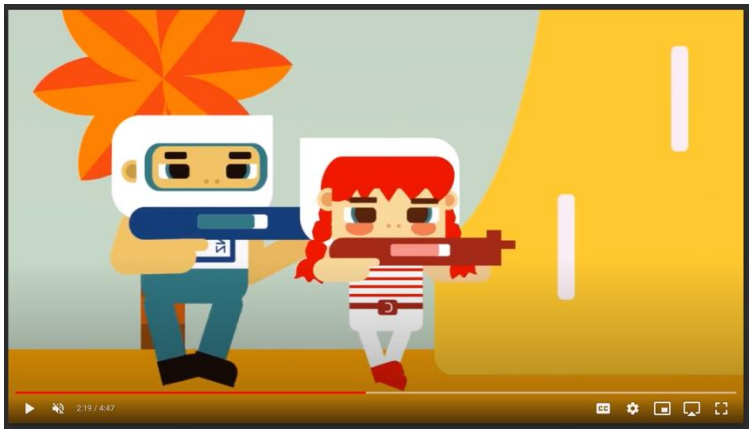


Figure 4 shows 2D animated video



Study findings from the quality evaluation of character design by professionals in the field of character design

Experts in character design assessed the characters' quality and determined that, with an average score of 4.33, they did a good job of representing the work's mood. Character suitability for use in motion graphics has a good mean value of 3.67. An average of 4.33 is obtained from the preliminary design work in response to the content, indicating good performance. The design's mean suitability for use in motion graphics is 4.33, which indicates good suitability. Consequently, character design experts' evaluations have an average rating of 4.17, which is within a good range. To sum up, the character designs are true to life. Theoretically appropriate, lovely, and captivating, ideal for motion graphic creation.

Study findings based on the quality evaluation by professionals in the field of animation directing

From assessing the media design and content quality of motion graphics work. by professionals in the field of animation directing It was discovered that the average for the content topic was 3.33, which is considered to be in fair condition. The subjects are arranged as follows: A mean value of 3.67 indicates appropriate event sequencing, which is regarded as good. The average for telling engaging stories is 3.33, indicating fair condition. With an average of 3, which falls into the fair range, the story unmistakably depicts acne. The average score for the motion simulation topic was 3, which is regarded as fair. It has a fair condition average of 3, and it is both interesting and beautiful. With an average of 3.84, the design topic is regarded as good. The subjects are arranged as follows: With a 3.67 average, the story and scenes are deemed appropriate and good. It has a good average score of four, making it both attractive and fascinating.

CONCLUSION AND DISCUSSION

1 Research findings that address concerns about the use of antibiotics to treat acne. Antibiotics come in two varieties that are used to treat acne: medications and medications. A topical medication called clindamycin is used to treat mild cases of acne. Benzoyl must be taken in addition to it in order to decrease drug resistance. One type of oral antibiotic tablet is doxycycline. used to treat moderately severe acne. Often utilized as the initial course of care,

Erythromycin is another medication used to treat moderate-to-severe acne, and users should use it instead if they experience an allergic reaction to the medication. can be used to treat pregnant women and small children's acne. The most dangerous antibiotic is Trimethoprim, which is the final tablet. Never use this as a stand-alone remedy. Antibiotic therapy for acne can only be applied by a professional. Purchases for personal use should not be made by patients.

2 Research findings that address concerns about whether antibiotics used to treat acne are appropriate for use in motion graphics design. We can conclude that motion graphics can make use of antibiotic motion graphic design. However, more movement and timing examples need to be studied. for more fluidity when creating motion graphics

3 Research findings that address concerns about the content and media design quality of motion graphics work. creating motion graphic material about acne treatments with antibiotics. Content regarding the use of antibiotics to treat acne has been added to inform viewers about the duration of treatment and the need for a specialist doctor's advice before using antibiotics. Purchases for personal use should not be made by patients. In Thailand, where antibiotics are overprescribed for acne, this has grown to be a serious issue.

In conclusion, the motion graphic design pertaining to the application of antibiotics in the management of acne is in light of the aforementioned theory, it is appropriate and appealing, making it a good choice for motion graphic creation. The aforementioned study results demonstrate that the evaluation of media quality by animation directing experts When the analysis's findings are contrasted using the good standard, it is thought to be in line with the research's declared goals and presumptions.

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