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Edutainment Alternative Treatment for Chicken Pox Using UV-C and Fruit Vegetables at the Sunan Ampel Sumbersari Orphanage, Malang City, Indonesia

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Abstract

Background: Chicken pox will still be one of the diseases at the Sunan Ampel orphanage in 2024. This is because there was an increase of 12% from the previous year. The large number of orphanage residents adds to the complex management of chicken pox

Aim: to increase knowledge about chicken pox, including its causes, signs, and symptoms, convensional therapies and compare with alternative treatment. With increased knowledge, the incidence of cases can also be reduced.

Method: Counselling using the edutainment method with pre-test and post-test for 47 Sunan Ampel Malang orphanage residents. Observations of incidence before and after the intervention were also recorded.

Result: There was an increase in the knowledge of orphanage residents, with an average pre-test of 56.6% and a rise of 81% after edutainment. The incidence three months before was 8 cases, and three months after the intervention was 0 cases.

Conclusion: This increase in average knowledge can indicate the success of extension using the edutainment method. The absence of new cases after the intervention suggests this outreach event's success. The community service took place smoothly and well and was received joyfully by the Sunan Ampel Orphanage residents on May 28th, 2024.

Keywords: Chicken Pox; Edutainment; UV-C; Fruit; Vegetables

Introduction

Chickenpox (chickenpox) is an infectious disease caused by the Varicella-zoster virus. This disease generally attacks children and is characterized by an itchy rash and fever [1-3]. Orphanages, with their crowded environments and high levels of interaction between children, are places that are vulnerable to the spread of chickenpox [4-7]. Several factors are behind the provision of counseling on alternative management of chickenpox at the Sunan Ampel Orphanage in Malang:

High risk of spreading chicken pox in orphanages

Orphanages have a dense environment with high interaction between children, so the chickenpox virus is easily transmitted. The basis of isolation has been taught beloved prophet Muhammad SAW "If you hear the disease outbreak somewhere, don't enter it, but if it happens where you are, do not leave." (Bukhari's hadith history).

Limited Access to Conventional Medical Treatment

Orphanages may have limited access to conventional medical treatment for chickenpox, such as antiviral drugs and hospital care. The costs of traditional medical treatment may be burdensome for orphanages.

There is a need for safe and effective alternative treatment

Several alternative treatments for chickenpox are safe and effective, such as using UVC lamps and consuming nutritious foods. This alternative treatment is easily accessible and relatively cheap compared to conventional medical treatment.

Need for Education and Increased Awareness

Children in orphanages may not understand enough about chickenpox, including how it is transmitted, its symptoms, and how to prevent it. Increasing education and awareness about chickenpox can help children protect themselves from this disease.

Encourage Healthy Behavior and Prevention of Chicken Pox

By increasing understanding and awareness about chickenpox, alternative management education can encourage children to adopt healthy behavior and prevent chickenpox. It can help reduce the risk of spreading this disease in orphanages.

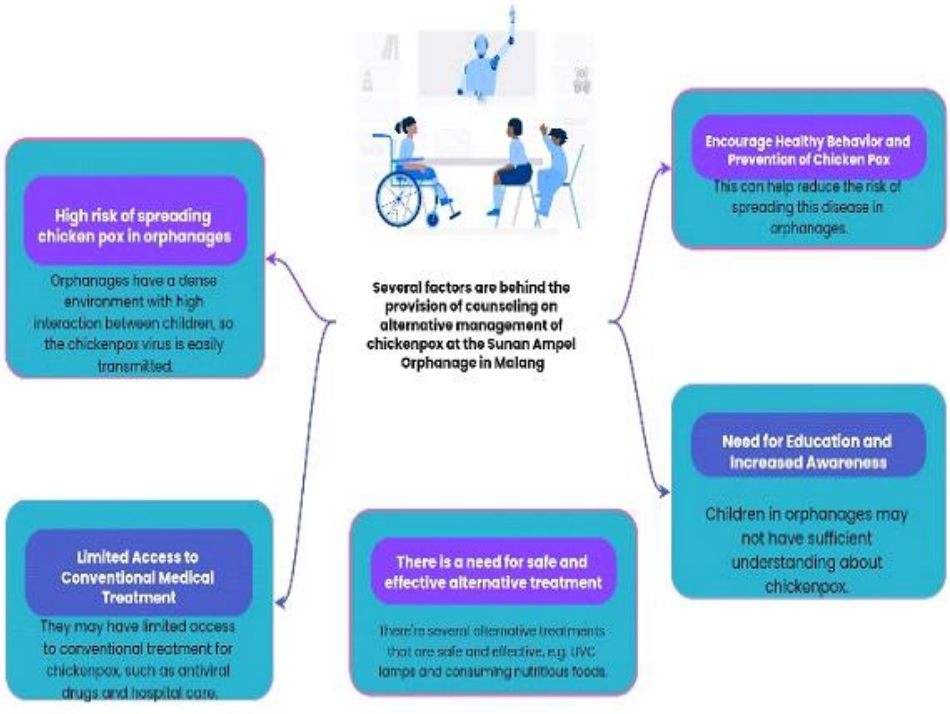

Diagram 1: Some factors of the need to have edutainment for alternative treatments of chickenpox at orphanages.

Counseling by edutainment on alternative treatments for chickenpox at the Sunan Ampel Orphanage in Malang was carried out to overcome several factors behind it, such as the high risk of spreading chickenpox, limited access to conventional medical treatment, the existence of safe and effective alternative treatments, the need for education and increasing awareness, and encouraging behavior. Healthy and prevention of chicken pox. This counseling will help children at the Sunan Ampel Malang orphanage understand chickenpox better, protect themselves from this disease, and improve their overall health **[8-10].**

Method

Education and entertainment counseling methods, abbreviated as edutainment, are necessary to increase enthusiasm, especially for orphanage children. This cheerful method is hoped to attract children's attention so that they become more aware and knowledgeable about chickenpox. The increase in children's knowledge is analyzed from pre-test

and post-test scores. In addition, success will be seen from the decrease in the incidence of chickenpox observed each month after the intervention.

Result

Data of the participants are shown in tables and charts below.

Table 1: Demographics Participant Based on Age and Gender.

	Category	Amount	Total	Percentage
1	Woman	30	47	63,83%
2	Man	17	47	36,17%
Total				100,00%

Age (47 People)						
Category	Age <1	Age 1-5	Age 6-10	Age 11-15	Age 16-20	Age >20
Total	0	2	6	19	16	4
Percentage	0,00%	4,26%	12,77%	40,43%	34,04%	8,51%

From **Table 1**, the distribution of participants is obtained: 30 are women (63.83%), and 17 are men (36.17%), so there are 47 people. Meanwhile, based on age, those aged less than one year were 0 (0%), aged 1-5 years were six people or 12.77%, aged 11 to 15 years there were 19 people (40.34%), aged 16-20 years were 16 people (34.04%) and more than 20 years of 8.51% or four people.

Table 2: Demographics Educational level.

Educational Level (47 People)						
Category	No School	Paud/Kindergarten	Elementary School	Junior High School	Senior High School	University
Total	0	2	6	19	16	4
Percentage	0,00%	4,26%	12,77%	40,43%	34,04%	8,51%

The data in **Table 2** shows that they are all in school. Two children (4.26%) are still in PAUD / Kindergarten, six children are in elementary school (12.77%), 19 children are in junior high school (40.34%), 16 children are in high school (34.04%), and four people have tertiary education (8.51%).

Table 3: The Results of the Pre-test and Post-test.

NO	PRE-TEST	POST-TEST

	QUESTIONS	% CORRECT	QUESTIONS	% CORRECT
1.	Does chickenpox only affect children?	40 %	Is it essential to drink lots of fluids while suffering from chickenpox?	70 %
2.	Is chickenpox transmitted through direct contact with chickenpox rash?	53 %	Can soaking in a warm bath with baking soda help reduce the itching caused by chickenpox?	80 %
3.	Can vaccination prevent chickenpox?	63 %	Can UVC kill chickenpox viruses in the air and on surfaces?	86 %
4.	Can scratching a chickenpox rash cause a bacterial infection?	70 %	Don't fruits and vegetables have a role in preventing chicken pox?	88 %
	Mean	56.6%	Mean	81%

From **Table 3**, several pre and post-test questions were obtained. A total of 4 questions were asked by raising your hand for a yes or no answer. The pre-test average was 56.6%, and the post-test was 81%.

Table 4: The Total Cases before Intervention in 2024.

No	Month	Cases
1	February	4
2	March	3
3	April	1

Table 4 provides information on the total number of cases before this edutainment intervention: 8, with details of 4 cases in February, 3 cases in March, and 1 case in April 2024.

Table 5: The Total Cases after Intervention in 2024.

No	Month	Cases
1	May	0
2	June	0
3	July	0

Table 5 shows that the total number of cases after intervention was 0 in 3 consecutive months, namely May, June, and July 2024. It shows the success of the intervention in reducing the morbidity rate of patients from the Sunan Ampel orphanage to the Maryam and Isa Clinic with complaints of chicken pox **(Chart 1)**.

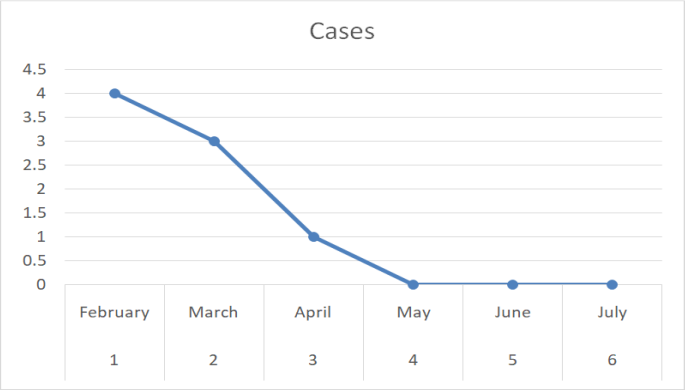

Chart 1: The Incidence of Chicken Pox Cases by Month 2024 in Sunan Ampel Orphanages.

Discussion

Chickenpox (chickenpox) is an infectious disease caused by the Varicella-zoster virus. This disease generally attacks children and is characterized by an itchy rash and fever. Orphanages, with their crowded environments and high levels of interaction between children, are places that are vulnerable to the spread of chickenpox. Counseling about alternative management of chicken pox at the Sunan Ampel Malang orphanage using edutainment methods is essential for several reasons:

Increase Understanding and Awareness

Counseling using educational methods can help children at the Sunan Ampel Malang orphanage understand chickenpox better, including how it is transmitted, its symptoms, and how to prevent it. It can increase their awareness about the disease and encourage them to take preventive measures. Residents' knowledge increased from an average of 56.6% to 81% after the outreach **[2,13].**

Figure 1: The children are enthusiastic during the session.

Promoting Safe and Effective Alternative Management

Apart from conventional medical treatment, several alternative therapies for chickenpox are safe and effective, such as consuming nutritious halal food, using herbs as natural masks, and using UV-C lamps to dry lesions and sterilize rooms **[8,9].**

Figure 2: The students are demonstrating the use of UV-C Lamp.

Increase Participation and Engagement

Edutainment methods involving games, animated videos, and interactive activities can make counseling more exciting and fun for children. It can increase their participation and involvement in counseling, making accepting the information and messages conveyed easier **[2,11].**

Building Trust and Comfort

Counseling using educational methods that are carried out in a friendly and fun way can help build trust and a sense of comfort for children at the Sunan Ampel Malang orphanage. It can encourage them to be more open and ask about chickenpox and alternative treatments **[10,12].**

Encouraging Healthy Behavior and Prevention of Chicken Pox

By increasing children's understanding, awareness, and participation, counseling using educational methods about alternative management of chickenpox can encourage them to adopt healthy behavior and prevent chickenpox. It can help reduce the risk of spreading this disease in the Sunan Ampel Malang orphanage **[10,11].**

Figure 3: The final documentation of the edutainment.

Some vegetables and fruits are suitable for chicken pox sufferers, and several references from scientific journals support the benefits of this nutrition. Fruits rich in vitamin C: Oranges, Kiwi, Strawberries, and Papaya: Vitamin C can improve the immune system and speed up wound healing **[14]**. Fruits containing antioxidants: Blueberries, Raspberries, and Blackberries. Antioxidants help fight infections and repair skin tissue **[15]**. Green vegetables: Spinach, Broccoli, and Kale. It is rich in vitamins A, C, and K and minerals like iron, essential for skin health and recovery **[16]**. Orange and red colored vegetables: Carrots, Pumpkin, and Red Bell Peppers. It contains beta-carotene, which the body converts into vitamin A, essential for healthy skin and the immune system **[17]**. Fruits that contain high water are watermelon, cucumber suri, and melon. It helps keep the body hydrated, which is vital during infections **[18]**. Fruits and vegetables that contain zinc: Nuts, Seeds, and Peas. Zinc is essential for wound healing and immune function **[19]**. Consuming vegetables and fruit with proper nutrition can help chicken pox sufferers speed up the healing process and support the body's overall health. UV-C can be used for air and surface disinfection in the environment of chickenpox sufferers. UVC helps reduce the risk of spreading the Varicella zoster virus (the cause of chickenpox) in closed spaces such as bedrooms or isolation rooms **[8,9]**. UV-C therapy in doses of 2 x 30 minutes can help heal skin lesions by reducing secondary bacterial infections in open wounds due to chickenpox. Several studies have shown that UV-C exposure can reduce itching and discomfort in chickenpox sufferers, although its use must be closely monitored to avoid side effects **[20,21]**.

Conclusion

Counseling using educational methods regarding alternative management of chickenpox at the Sunan Ampel Malang orphanage is an essential step in increasing children's understanding, awareness, and participation in preventing and

treating this disease. With an exciting and fun method, this education can encourage healthy behavior and help reduce the risk of spreading chickenpox in orphanages. In Qur'an surah Al-Baqarah 222, Allah SWT states, "Surely Allah loves those who always turn to Him in repentance and those who purify themselves."Personal hygiene, proper hand washing, and isolation using UVC lamps are excellent in chicken pox therapy. The author also advises eating food that is halal in its substance and good at obtaining it, not using any means to obtain this food. Because the blessing of Allah SWT is also where we get this sustenance, praying bismillah before eating is also necessary so that blessings remain. Hopefully, we will all be safe and enter Allah SWT's heaven. Amen.

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