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RESEARCH ARTICLE

The Impact of Education on Sunscreen Use and Skin Cancer Prevention Behaviors among High School Students in Makassar, Indonesia

Helma Liana Safitri M[1], Wahiduddin[2], Andi Zulkifli[2], Nur Nasry Noor[2], Suriah[3]

[1] Magister Program Student , Faculty of Public Health, Hasanuddin University
[2] Department of Epidemiology, Faculty of Public Health, Hasanuddin University
[3]Department of Health Promotion, Faculty of Publiv Health, Hasanuddin University

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***Corresponding Author**

helmalianasafitri.m@gmail.com

ABSTRACT

Skin cancer is a type of neoplasm that can be malignant. One of the factors that can contribute to the occurrence of skin cancer is UV exposure. To analyse the effect of sunscreen education on skin cancer prevention behaviour. This study was a quasi-experimental study with the randomised pre-test and post-test control group design on 124 students at SMAN 2 and 1 Makassar with probability sampling method. Data collection was conducted on 16 July 6 August 2024 using a questionnaire through google form. The analysis was done using univariate and bivariate analysis. There is a difference in knowledge of skin cancer prevention before and after sunscreen use education (p = 0.000), there is a difference in skin cancer prevention attitudes before and after sunscreen use education (p = 0.000), there is a difference in skin cancer prevention actions before and after sunscreen use education (p = 0.000), and there is a difference in behaviour between the main intervention group and the comparison intervention for skin cancer prevention before and after sunscreen use education with statistical tests of knowledge (0.000), attitudes (0.004), and actions (0.003). So that in this study video media is more effective as an educational media for the use of sunscreen on skin cancer prevention behaviour than leaflet media.

INTRODUCTION

Skin cancer is a type of neoplasm that can be malignant. One of the factors that can contribute to the occurrence of skin cancer is exposure to ultraviolet (UV) light. (Arfina et al., 2024). Sunscreen is a cosmetic preparation used to protect the skin from exposure to sunlight, especially ultraviolet (UV) which can absorb, scatter and reflect UV rays (Agnesa et al., 2024). (Agnesa et al., 2022). Sunscreen contains SPF (Sun Protection Factor) and PA (Protection Grade of UV A). SPF in sunscreen is the ability of sunscreen to protect the skin against exposure to UV radiation. (Mulya Miranti & Rizka, 2024)..

According to data from the Global Cancer Observatory (GLOBOCAN) for 2022, skin cancer occupies a significant position at the international level with 331,647 new cases reported in 183 countries, making it the 17th most commonly diagnosed cancer in the world. However, in terms of deaths, skin cancer ranks 22nd, with 58,645 deaths recorded. Research in Australia showed that 46% of respondents claimed to have experienced one or more burns due to sun exposure. Australia is one of the countries with the highest number of skin cancer patients, four times higher than the United States (Savera et al., 2020).

The Taiwanese study explains that data related to the impact of ultraviolet exposure in Asia is not yet available and explored, but this study explains that there is an increased risk of cancer due to ultraviolet exposure in Asian adolescents aged 15-24 years and people with prolonged exposure to ultraviolet light.

According to WHO, skin cancer in Indonesia in 2022 shows 5,245 cases, with a proportion of 0.52 per 100,000 population. Of these, 1,716 are newly diagnosed cases, accounting for 0.42% of all cancer cases, making skin cancer the 22nd most common cancer in Indonesia. Despite the significant number of newly diagnosed cases, skin cancer ranked 24th in terms of deaths, with 774 deaths accounting for 0.32% of total cancer deaths. And in Indonesia, according to data from the Cancer Registration Agency, Indonesian Pathologists Association, out of 1,530 skin cancer cases, the most common case was basal cell carcinoma, at 39.93% (Savera et al., 2020).

People who often do outdoor activities and are exposed to direct sunlight are a group at risk of skin cancer. Based on these results, awareness of the use of sunscreen before starting daily activities indoors and outdoors is still lacking (Subaidah et al., 2023) Routine use of sunscreen can reduce the risk of various skin diseases. An understanding of the importance of using sunscreen or sunscreen can protect the skin from the losses caused by sunlight (Shafa et al., 2020). Exposure to ultraviolet (UV) rays in the sun is the main factor causing skin cancer. The depletion of the ozone layer in the atmosphere makes it easier for solar radiation to penetrate into the skin layer and increase the risk of skin cancer (Ayu et al., 2019).

Indonesia is a tropical country located right on the equator which is full of abundant sunlight throughout the year. Sunlight consists of rays with wavelengths of 10-400 nm called ultraviolet (UV) light. In some ways, UV light is beneficial to humans including to synthesise vitamin D and also serves to kill bacteria. But besides these benefits, UV rays can also harm humans if exposed to human skin for too long (Michael et al., 2019).

Education is a process of learning activities for each individual or group that aims to improve the quality of mindset, knowledge and develop the potential of each individual. This educational process in everyday life is better known as the learning process. Education is the process of learning from not knowing to knowing (Finthariasari et al., 2020). Education can be done in many ways, including providing education through videos and leaftlets (Angraini et al., 2023)..

Adolescents have the opportunity to be outdoors which allows exposure to more UV rays with high intensity (Arfina et al., 2024). Given the adverse effects of sun exposure that can increase the risk of developing skin cancer and the lack of knowledge about the importance of using sunscreen, it is necessary to overcome or prevent the incidence of skin cancer through education.

Sunscreen is needed especially for high school students who have more outdoor activities (Subaidah et al., 2023). Late adolescence is a phase where hormonal, physical, psychological and social changes occur. These changes accompany the urge to explore new opportunities and experiences in activities. Adolescent leisure activities involve various things such as sports and recreation, personal capacity building, and social interaction. Common sports and recreational activities include running and cycling, as they do not require specialised skills and are often done outdoors, providing more sun exposure (Dea et al., 2024).

The use of sunscreen from an early age can prevent premature aging and skin cancer. This is the basis for educating adolescents about the use of sunscreen as an effort to prevent skin cancer in students at SMAN 2 Makassar and SMAN 1 Makassar. Proven from the results of research by Nahar, V. K., et al (2018) stated that the better knowledge in preventing skin cancer is proportional to the increase in self-protection efforts from sun exposure.

METHODS

This research is a quasi-experimental study with the design of *the randomised Pre-test* and *Post-test Control Group Design* which aims to compare the results of health programme interventions. This study involved two groups given the same questions first and then the action after that was

given the same questions. Aiming to determine the effect of education on the use of sunscreen on skin cancer prevention behaviour in students of SMAN 2 Makassar and SMAN 1 Makassar Year 2024. This research was conducted in August 2024 with the population in this study were students of class XI (eleven) 360 students of SMAN 2 Makassar and 360 SMAN 1 Makassar while the number of samples was 62 people in each group, so based on the research there were 2 groups, the total number of samples needed was 124 people. This study was conducted by giving a pre-test questionnaire distributed via *Google Form* which was distributed to *Whatsapp* before providing education using video media and leaflets. Then a post-test questionnaire was given on the 7th day after the intervention to see the level of change in knowledge, attitudes and actions of the students.

RESULTS

1. Respondent Characteristics

Table 1. General Characteristics of Respondents Based on Gender and Age

Respondent Characteristics	Intervention Group Main		Comparison Intervention Group	
	n	%	n	%
Gender				
Male	17	27,4	21	33,9
Women	45	72,6	41	66,1
Age				
14	1	1,6	1	1,6
15	7	11,3	15	24,2
16	53	65,5	41	66,1
17	1	1,6	5	8,1

Based on table 1. Above, it can be seen that the gender of respondents in the main intervention group and comparison intervention is mostly female with a proportion in the main intervention group, namely 45 respondents (72.6%). based on age, the most at the age of 16 years, namely 53 people (65.5%) in the main intervention group and 41 people (66.1%) in the comparison intervention group. Characteristics of respondents based on age were mostly at the age of 16 years, namely 53 people (65.5%) in the main intervention group and 41 people (66.1%) in the comparison intervention group.

2. Mean knowledge, attitudes and actions of the Main Intervention Group before and after education

Table 2. Mean distribution of knowledge, attitudes and actions of the Main Intervention Group before and after education

Main Intervention		Min	Max	Mean	SD
Knowledge	Pretest	5	10	7,33	1,26
	Posttest	8	13	11,12	0,94
Attitude	Pretest	37	57	46,48	5,05
	Posttest	42	58	50,17	4,20
Action	Pretest	0	30	20,21	6,67
	Posttest	10	31	23,40	5,42

Based on table 2. it can be seen that the average knowledge in the main intervention group before the treatment of knowledge is lower at 7.33, min/max value = 5/10 with SD = 1.26 and after treatment knowledge increases higher to 11.12. The min/max value = 8/13 with SD = 0.94. The mean attitude in the main intervention group before treatment was 42.48, min/max value = 37/57 with SD 5.04 and after treatment knowledge increased higher to 50.17, min/max value = 42/58 with SD = 4.20. The mean action in the main intervention group before treatment was

lower at 20.21, min/max value = 0/30 with SD = 6.67 and after treatment action increased higher to 23.40. The min/max value= 10/31 with SD= 5.42.

3. Mean Knowledge, attitudes and actions of the Comparison Intervention Group before and after education

Table 3. Mean distribution of knowledge, attitudes and actions of the Comparison Intervention Group before and after education

Comparison Intervention		Min	Max	Mean	SD
Knowledge	Pretest	5	12	7,75	1,,53
	Posttest	8	13	10,25	1,30
Attitude	Pretest	36	53	45,22	4,08
	Posttest	39	54	47,85	4,68
Action	Pretest	0	32	17,85	7,93
	Posttest	3	32	19,93	6,80

Based on table 3, it can be seen that the average knowledge in the comparison intervention group before the treatment of knowledge was lower at 7.75, the min/max value = 5/12 with SD = 1.53 and after the treatment of knowledge increased higher to 10.25. The average attitude in the comparison intervention group before the attitude treatment was lower at 45.22, the min/max value = 36/53 with SD = 4.08 and after the treatment the attitude increased higher to 45.22. The average action in the comparison intervention group before treatment was lower at 17.85, the min/max value = 0/32 with SD = 7.93 and after treatment the action increased higher to 19.93. The min/max value = 3/32 with SD = 3.68.

4. Differences in Knowledge of Skin Cancer Prevention before and after education in the main intervention and comparison intervention groups.

Table 4. Differences in Knowledge of Skin Cancer Prevention Before and after Education in the Main Intervention and Comparison Intervention

Group	Variables	Mean	Standard Deviation	P-Value
Main intervention	Pretest	7,33	1,26	0,000
	Posttest	11,12	0,94	
Comparison Intervention	Pretest	7,75	1,53	0,000
	Posttest	10,25	1,30	

Based on table 4, it can be seen that the mean value in the main intervention group before being given education using video media is 7.33 and after treatment it increases to 11.12 with a P value of 0.000 <0.005, which means that there is a difference in knowledge of preventing skin cancer before and after education on the use of sunscreen using video media.

The mean value in the comparison intervention group before being given education using leaflet media is 7.75 and after treatment it increases to 10.25 with a P value of 0.000 <0.005, which means there is a difference in knowledge of preventing skin cancer before and after education on the use of sunscreen using leaflet media.

5. Differences in skin cancer prevention attitudes before and after education in the main intervention and comparison intervention groups.

Table 5. Differences in Attitudes towards Skin Cancer Prevention Before and after Education in the Main Intervention Group and Comparison Intervention

Group	Variables	Mean	Standard Deviation	P-Value
Main intervention	Pretest	46,48	5,05	0,000
	Posttest	60,17	50,17	
Comparison Intervention	Pretest	45,22	4,08	0,000
	Posttest	47,85	3,68	

Based on table 12, it can be seen that the mean value in the main intervention group before being given education using video media is 46.48 and after being given treatment it increases to 60.17 with a P value of 0.000 <0.005, which means that there is a difference in attitude towards preventing skin cancer before and after education on the use of sunscreen using video media.

The mean value in the comparison intervention group before being given education using leaflet media is 45.22 and after treatment it increases to 47.85 with a P value of 0.000 <0.005, which means there is a difference in attitude to prevent skin cancer before and after education on the use of sunscreen using leaflet media.

6. Differences in skin cancer prevention measures before and after education in the main intervention and comparison intervention groups.

Table 6. Differences in Skin Cancer Preventive Measures Before and after Education in the Main Intervention Group and Comparator Intervention

Group	Variables	Mean	Standard Deviation	P-Value
Main intervention	Pretest	20,21	6,67	0,000
	Posttest	23,40	5,42	
Comparison Intervention	Pretest	17,85	7,93	0,000
	Posttest	19,93	6,80	

Based on table 13, it can be seen that the mean value in the main intervention group before being given education using video media is 20.21 and after being given treatment it increases to 23.40 with a P value of 0.000 <0.005, which means that there is a difference in skin cancer prevention before and after education on the use of sunscreen using video media.

The mean value in the comparison intervention group before being given education using leaflet media is 17.85 and after treatment it increases to 19.93 with a P value of 0.000 <0.005, which means there is a difference in skin cancer prevention before and after education on the use of sunscreen using leaflet media.

7. Mean and difference analysis of knowledge attitude and action after education in the main intervention and comparison intervention groups.

Table 7. Mean and difference analysis of knowledge after education in the main intervention group and comparison intervention

Group	Variables	Min	Max	Mean ± SD	p-value
Main intervention	Posttest	8	13	11,12 ± 0,94	0,000
Comparison Intervention	Posttest	7	13	10,26 ± 1,30	

Table 7 shows that the average value of the difference in knowledge after education in the main intervention group is 11.12 and the comparison intervention is 10.26, the p value is 0.000< 0.05, so there is a difference in knowledge after education in the main intervention group and the comparison intervention group.

Table 8. Mean and difference analysis of attitudes after education in the main intervention and comparison groups

Group	Variables	Min	Max	Mean ± SD	p-value
Main intervention	Posttest	42	58	50,17 ± 4,20	0,004
Comparison Intervention	Posttest	39	54	47,85 ± 3,67	

Based on table 8, it shows that the average value of the difference in attitude after education in the main intervention group is 50.17 and the comparison intervention is 47.85, the p value is 0.004< 0.05, so there is a difference in attitude after education in the main intervention group and the comparison intervention group.

Table 9. Analysis of mean and difference in actions after education in the main intervention and comparison intervention groups

Group	Variables	Min	Max	Mean ± SD	p-value
Main intervention	Posttest	10	31	23,40 ± 5,42	0,003
Comparison Intervention	Posttest	3	32	19,93 ± 6,80	

Based on table 9, the average value of the difference in action after education in the main intervention group is 23.40 and the comparison intervention is 19.93, the p value is 0.003< 0.05, so there is a difference in action after education in the main intervention group and the comparison intervention group.

DISCUSSION

1. Differences in knowledge of skin cancer prevention before and after sunscreen education.

Based on the results of the study, the mean score of knowledge from *pre-test* to *post-test* increased significantly after educational intervention on the use of sunscreen as skin cancer prevention using video media. Based on the results of statistical tests, it can be concluded that there is an effect of education using video media on increasing respondents' knowledge about the use of sunscreen to prevent skin cancer. The comparison intervention group in this study conducted education using leaflet media. Based on the results of the study, there was an increase in the mean score of knowledge. The increase in the mean score occurred after respondents were given leaflet media education. The statistical test results of the comparison intervention group from pre-test to post-test increased, meaning that there was a significant effect of education using leaflet media on the mean score of respondents' knowledge of the use of sunscreen to prevent skin cancer. Although the increase in knowledge in the leaflet media group was also significant, the results were not as great as in the video media group. Thus, the hypothesis that there is a difference in knowledge improvement between the two interventions is accepted, with video media showing higher effectiveness than leaflet media.

Video is a medium that can present sentences of messages and movements using animation so as to make the audience interested and ultimately strengthen the acceptance of the knowledge information conveyed. Another advantage is that it saves time and can be repeated at any time if needed. The disadvantages of video media are that it is less able to master the attention of participants, the content of the message and the images presented are less able to be displayed

perfectly because it uses electronic devices and communication is one-way. (Ramdaniati & Somantri, 2022)

This study is in line with research (Sayuti et al., 2022) which shows that of the 72 respondents after being given health education using video media, it can be concluded that statistically there is a significant difference between knowledge before and after intervention using video media. This shows that the average knowledge score before and after the intervention has increased by 2.28 points.

Other research conducted by Ramdaniati & Somantri, (2022) on respondents who were given counselling about covid-19. This study shows a difference before (pretest) and after (postest) education is carried out which shows the average score of respondents' knowledge about Covid-19. The statistical test results show that there is a difference in the average knowledge score between before and after being given counselling using video media. Video is a medium that can present sentences of messages and movements using animation so that it can make recipients of the knowledge information conveyed. (Sayuti et al., 2022)..

Other research conducted by Lestari et al., (2021) who found that there was an effect of counselling using leaflet media on SADARI knowledge in class XI female students at MAN Yogyakarta. The results of statistical tests using the Wilcoxon Test found that Ho was rejected and Ha was accepted, which means that there is an effect of educational counselling using leaflet media. Through leaflet media, it will be explained clearly about SADARI, namely understanding, objectives, the right time to do SADARI, and the steps of SADARI. So it can be concluded that there is an effect of leaflets with increased knowledge, namely because visual media makes respondents more active in reading so that the information obtained is easier to remember.

Based on the discussion above, it can be concluded that video and leaflet media can influence the increase in knowledge because videos have audio and visual usur so that information will quickly arrive if heard and read and *leaflet* media can increase knowledge because it contains material that is brief, clear and has interesting pictures so that it makes teenagers' curiosity increase and are interested in reading it.

2. Differences in skin cancer prevention attitudes before and after sunscreen education.

Based on the results of the study in the main intervention group, the mean pre-test to posttest score increased significantly after an educational intervention on the use of sunscreen as a prevention of skin cancer using video media, which means that there are differences in attitudes towards preventing skin cancer before and after education on the use of sunscreen using video media. In the comparison intervention group, the results of the statistical test of attitude in the *pre-test* increased, which means that there is a difference in the attitude of preventing skin cancer before and after education using leaflet media.

Attitude in Green's theory is a predisposing factor that affects a person's behaviour. Attitude change is not as simple as knowledge change. To form a person's attitude or willingness to behave, a person needs a strong belief in the benefits of that behaviour. (Handayani et al., 2023)..

The audiovisual media used also supports the process of forming children's attitude patterns. Video media relies on vision and hearing. The utilisation of this media uses all the sensory organs so that it is likely that the information received can be understood. Media containing material is able to change children's attitudes because it is explained uniquely and in detail. With the effect of moving images and sound effects heard will make children interested and pay attention to the object so that what is seen and heard will be imitated by children. Through this media, there is a great influence on children which has an impact on attitude change which is the result after the learning process is carried out. (Sambo et al., 2023)..

This research is in line **with** Sambo et al., (2023) with the results of statistical tests obtained a significant value, which means that there are differences in attitudes after being given education

about health protocols using video media, it can be concluded that there is an effect of education about health protocols on the attitudes of children aged 10-12 years at SD Frater Bakti Luhur.

Based on the use of media, in the research / education process carried out, the health promotion media used was leaflet media where the results of the researcher's analysis also saw that leaflet media tended to have an impact on changes in respondents' attitudes because the material presented in the leaflet was easy to understand because the language used tended to be short and clear and the leaflets were easy to carry everywhere so that they always reminded respondents of the material in the leaflet. Karim et al., (2024).

In addition, leaflets can reach more widely and help the reach of other media, can be used as reference material in finding information, can be reprinted if needed again and can also be used for discussion on different occasions. And leaflets can be stored for some time and can be read again whenever needed. In addition, leaflets can reach more widely and help the reach of other media, can be used as reference material in finding information, can be reprinted if needed again and can also be used for discussion materials on different occasions. (Ramdaniati & Somantri, 2022)..

In line with Research Karim et al., (2024) stated that there was an effect of education using leaflet media on the attitude of adolescent girls in taking blood tablets in the Tana Lili Luwu Utara Puskesmas work area. So that education using video media in the main intervention and leaflet media in the comparison intervention has an effect in increasing the attitude of using sunscreen as cancer prevention.

3. Differences in skin cancer prevention actions before and after sunscreen use education

Based on the results of the study, in the main intervention group using video media there was an increase from pre-test to post-test, which means that there are differences in skin cancer prevention actions before and after education on the use of sunscreen using video media. The comparison intervention group in this study used leaflet media. Based on the results of the study, there was an increase in the mean score of respondents' skin cancer prevention measures from pre-test to post test. The increase in the mean score occurred after respondents were given education using leaflet media. This means that both video media and leaflet media are effective in improving skin cancer prevention measures, although there are differences in the level of effectiveness between the two.

This is in line with the theory in Herlinadiyaningsih, (2022) which states that video media in providing health counselling is the right and interesting media in conveying information because it affects the results of health counselling. Video media displays moving images, writing, and there is a sound that explains the images displayed, so that it can attract the attention of the target health counseling.

Video media has the following benefits: helping to give the right impression, encouraging children's interest in the learning process, increasing better understanding, adding variety to teaching methods, increasing children's curiosity so as to make children more critical of learning, and providing new concepts from something outside the usual experience. This research is in line with (Lidiasari et al., 2024) which shows that there is an increase before and after health education using video media with a sample size of 30 respondents. This shows that there are differences in diarrhoea prevention behaviour after being given health education. So it can be said that health education with video media shows there are changes.

Based on the results of this study, leaflet media can also improve adolescent behaviour to be better than before, especially in the use of sunscreen. This is in line with research conducted (Wulandari et al., 2020) entitled "The Effect of Health Education with Leaflet Media to increase knowledge and behaviour in an effort to implement health protocols in Temanggung car fee day traders" which shows that health education using leaflet media can improve behaviour in traders who sell at car free day. So that education using video media in the main intervention and leaflet

media in the comparison intervention has an effect in increasing the action of using sunscreen as cancer prevention.

4. Differences in behaviour between the main intervention and comparison intervention groups for skin cancer prevention before and after sunscreen education.

In the main intervention group using video media and comparison interventions using leaflet media before being given health education, the level of knowledge, attitudes and actions of students of SMAN Makassar obtained hypothesis results that there were no differences in knowledge, attitudes and actions of respondents. Both interventions with media or in other words, respondents have the same basic knowledge before being given health education so that between the main intervention group and the comparison intervention depart from the same initial condition so that if different interventions are given then there are differences in results, it is due to different interventions/treatments.

After education on knowledge, attitudes and actions in skin cancer prevention, there was a significant difference in the mean scores of the two groups, which means that there is a difference in skin cancer prevention behaviour in the main intervention and comparison intervention groups.

The theory underlying the differences in outcomes between the main intervention and comparison groups is the Social Learning Theory proposed by Albert Bandura in the 1960s. This theory states that individuals learn through observation and experience, including through media. Video media, as a more dynamic and interactive medium, can be more effective in improving knowledge, attitudes and actions because it can present information in a more interesting and memorable way than leaflets, which are more static. Bandura argues that visual media involving audiovisual elements can reinforce learning by providing concrete examples of desired behaviours and their effects. (Yanuardianto, 2020).

Counselling through video media is more effective than leaflet media, because the video method can present what cannot be experienced directly by respondents, this is because audiovisual media presents a real situation of the information conveyed to create a deep impression. In addition to accelerating the learning process with audiovisual assistance, it can increase the level of intelligence and change passive and static attitudes towards active and dynamic attitudes. In contrast, leaflets are limited to visual media where the respondent's attention is divided between the media as visual and the presenter of the material as an audio source that operates the media (Dianna et al., 2020)

According to observations from researchers, the difference in mean scores between the main intervention group and the comparison intervention means that providing education using video media has a greater level of influence than providing education using leaflet media in increasing respondents' knowledge regarding the use of sunscreen as a prevention of skin cancer. In line with research conducted (Kurniasari et al., 2023) Health education with video and leaflet media increases knowledge. The knowledge of respondents who were given education using videos increased by 4% while the knowledge of respondents who were given education using leaflets increased by 2%. It can be concluded that health education is more effective using video media in increasing cadre knowledge than using leaflets.

In contrast to other studies, the results showed that the extension group with *leaflet* media had a higher difference in the average value of knowledge than the extension group with video media. This shows that counselling with *leaflet* media is more effective than counselling with video media because during the implementation of counselling using a break time where student concentration is not too focused to see the video display displayed. (Ramdaniati & Somantri, 2022).

In line with research (Yuliati et al., 2024)From the results of the attitude statistical test, there is a difference in the average attitude between the video media group and the leaflet group, so it can

be concluded that video media is more effective in improving attitudes about anaemia at SMPN 19 and Pondok Pesantren Salafiyah Hidayatul Qomariyah Bengkulu City.

Attitudes in each individual can be different, if you like or agree with an object, you will approach, find out, and join, otherwise if you don't like or disagree, you will avoid or stay away. Attitude is a process of assessment carried out by someone against an object. Attitude is a reaction or response that is still closed from a person to a stimulus or object. So that attitudes will involve thoughts, feelings, attention and other psychological symptoms (Angraini et al., 2023)

In line with research (Antari et al., 2020) stated that there was a significant difference between providing health education with video media compared to leaflet media. There is a difference in the posttest hand washing behaviour of the video group compared to the posttest of the leaflet group which shows the average value of the intervention group (video media) 22.88 and the average value of the control group (leaflet) 10.12 so that it has a difference of 12.76. The results of the statistical test mean that there is a significant difference between providing health education with video media compared to leaflet media. This means that health education is more effective using video media compared to leaflet media. Online educational media can have an impact on increasing understanding and changing behaviour. (Sabarudin et al., 2020).

Based on the results of the study, it was found that the average knowledge, attitudes and actions were higher in the main intervention group using video media than the comparison intervention group with leaflet media. Educational videos have been proven to be used as a comprehensive promotional and educational tool to improve health knowledge, attitudes and behaviour. (Aisah et al., 2021).

The advantage of video media is that it produces images and sound so that it can attract the attention and interest of the target so that it is more easily understood by the target. Another advantage is that it saves time and can be repeated at any time if needed. And the disadvantages of leaflet media are that it cannot be given to target groups who cannot read well / illiterate. In addition, if the print is unattractive and boring, people tend not to want to read and keep it as reading material. Other disadvantages of leaflets are that they do not produce sound effects and animations that attract attention. (Ramdaniati & Somantri, 2022)

According to Notoatmodjo (2012), knowledge is the result of "KNOWING" and this occurs after people perceive a certain object. Sensing occurs through the five human senses, namely the senses of sight, taste and touch. Most human knowledge is acquired through the eyes and ears. The more senses that are used, the better and clearer the knowledge obtained. So it can be concluded that video media in health research can increase respondents' knowledge (Dianna et al., 2020).

Based on the discussion above, it can be concluded that video and leaflet media can affect the increase in knowledge, attitudes and actions. Although the improvement in the comparison intervention group using leaflet media was also significant, the results were not as great as in the main intervention group using video media. Thus, the hypothesis stating that there is a difference in behavioural improvement between the two interventions can be accepted, with video media showing higher effectiveness than leaflet media.

CLOSING

1. There is a difference in knowledge of skin cancer prevention before and after sunscreen use education.
2. There is a difference in the attitude of skin cancer prevention before and after sunscreen use education
3. There is a difference in skin cancer prevention measures before and after sunscreen education.
4. There was a difference in behaviour between the main intervention and comparison intervention groups for skin cancer prevention after sunscreen education.

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