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Section A-Research paper

LEADED EDUCATION WITH ATTITUDES AND CULTURAL BEHAVIORS OF DRINKING CAP TIKUS IN MINAHASA COMMUNITIES, NORTH SULAWESI, INDONESIA

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Abstract

Alcohol consumption is a serious health problem. The habit of consuming alcohol causes disturbances in the biopsychosocial perspective, impaired immunity, psychologically, and has an impact on social life. This study aimed to assess the influence of the pedagogical model on the attitudes and behaviors of the Minahasa community's cap tikus consumption culture. This study is quantitative and includes a quasi-experimental pre- and post-test for the control group. A pamphlet was used to educate the control group, while the intervention group received a guided education model and a video in their native language. A cluster-randomized trial was used for sampling, with 35 respondents in the control group and 35 respondents in the experimental group. The p-value for the influence of the guided education model and video intervention on the attitudes and behaviors of the cap tikus drinking culture was 0.0001. Conclusion: There were significant differences in the attitudes and behaviors of the cap tikus drinking culture between the control group and the intervention group before and after receiving various types of education. This indicates that the guided education method/model employing video media has a substantial effect on imbibing with Cap Tikus.

Keywords: Education; Attitude; Behavior; Culture; Cap Tikus.

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1. Introduction

Indonesia is an archipelago made up of numerous cultures with distinct origins and histories. The habit of drinking alcoholic beverages can be detrimental to health, particularly when consumed in excess and on a regular basis (Rumbay, 2021; Jacobm 2021; Nelwan et al., 2018). Alcohol abuse can cause damage to numerous organs in the body, including the liver, brain, and heart. Besides, consuming alcoholic beverages can lead to addiction, hangover, and inability to control yourself (Salakory, 2012; Supit et al., 2017; Manoppo et al., 2020). The habit of drinking alcoholic beverages causes changes in the value of liquor in society, alcohol which is considered bad by law or religion becomes something that is considered normal and reasonable to do. As a result of this drinking habit, there will be impacts, especially negative ones in terms of social, economic, and especially public health in the area (Sotos 2015; David & Kofahl, 2017; Panjuju & Prasetyo, 2020).

The dangers arising from consuming alcohol in the blood vessels can cause hypertension, the heart can cause arrhythmias, and heart failure. Besides, it can cause damage to the nervous system and cirrhosis of the hepatic (Barlin, 2006; Mingkid, 2020; Pratiknjo & Mambo, 2019). Similar to carbon monoxide, alcohol can enhance the acidity of the blood. In order for sufficient blood to reach the tissues, the blood becomes more viscous and the heart must circulate it with greater force. Alcoholic beverages are any form of alcoholic beverage. Cap tikus is a type of drink with an alcohol content of 30-55% which is produced from the process of distilling the juice. The high and low levels of alcohol in drinks depend on the quality of the distillation. The better the distillation system, the higher the alcohol content in the cap tikus drink (Barlin 2006; Lungan, 2017; Jacob, 2021).

North Sulawesi Province which still maintains the tradition of consuming alcoholic beverages is Minahasa Regency. One of the cultures of the people in Minahasa Regency has long been, namely consuming alcoholic drinks in every traditional celebration. The alcoholic drink from the Minahasa is called a cap tikus which comes from the juice of the mother tree or sap (Borassus flabellifer) (Manoppo et al., 2020; Nelwan et al., 2022. This cap tikus is presented at every traditional event in Minahasa and is a tradition that is still being preserved. This is done while upholding the values of local wisdom that must be maintained. Even though the habit of consuming alcoholic drinks is a bad habit and can affect health, especially if consumed excessively and continuously (Goal & Husin, 2013; Supit et al., 2017; Ihsan et al., 2020).

The cap tikus is already known in Minahasa as an alcoholic drink that has an alcohol content of 40-70% and is made from the sap tree or so-called Seho tree by the Minahasa people. In the Minahasa community, drinking the cap tikus is done in the morning before going to the garden with a small glass dose. Most of the Minahasa people drink the cap tikus before eating, at night, also to warm the body. Another culture is when entering a new house (in the Minahasa culture is rumambak), the owner of the house will provide a cap tikus as a symbol of happiness and gratitude (Prakitjo MH, Mambo R, 2019; Kandou et al., 2018; Kalengkongan et al., 2018).

The results of direct interviews with residents of the village of Tumaratas Dua, it was found that the alcohol known as cap tikus is considered a body warmer, an appetite enhancer, and an encouragement to work. Drinks cap mice also a traditional alcoholic beverage that is characteristic of the community, but it also became the main raw material of wine-making factory in North Sulawesi. Efforts that can be made to change a person's behavior can be done through persuasion, persuasion, information about health, increasing awareness and if the behavior is successfully adopted by someone, it will be

able to last for a long time (Notoadmodjo 2007; Mingkid, 2020; Fentie et al., 2020). According to Notoatmodjo (2007), education or health promotion is an effort to intervene in someone to behave well or to support health. In other words, health education or promotion seeks to influence the behavior of individuals, families, groups, or communities to participate in improving health status. For this reason, efforts are needed to be able to change attitudes and cultural behavior of drinking rat stamp in society through guided education.

Guided education methods are individual and are usually used to foster new behaviors, or to foster someone who becomes interested in a behavior change or innovation. There are two forms of the approach used, namely Guidance and Counceling and interview. To know the effectiveness of the guided educational model with local language educational videos on the attitudes and behavior of drinking cap tikus culture in Minahasa community.

2.   Method

This is a quantitative study utilizing a quasi-experimental control group pre-posttest to compare the intervention in the control group to the intervention group; the differences between the pre-test and post-test are assumed to represent the effect of the experiment (Arikunto, 2006).

During data collection, questionnaires were used to measure attitudes, while observation papers were used to measure behavior. There are fifteen items and twelve observation pages in the attitude survey. Twenty respondents were surveyed in the village of Tumaratas Satu to evaluate the validity and reliability of the instrument devised by the researcher. The value of each item's validity test was greater than 0.30. According to Nanuli (1994, in Dharma 2011), the query item is considered valid if r is greater than 0.30. According to Anastasia and Urbina (1997, in Dharma

2011), the normal value for the Cronbach Alpha reliability test is 0.8, while the value in this study was 0.992. This demonstrates that both the attitude questionnaire and the behavioral observation document are valid and reliable.

Conduct sample selection according to the criteria for the control group, specifically in the village of Tumaratas Dua based on the established inclusion criteria. In addition to the team and research assistants, the Head of the Village and the Head of a Guard assist with this activity as field assistants. Next, compile a list of potential respondents who are dispersed throughout four guardians of two Tumaratas villages. Then, assemble samples within each guard and conduct random sampling techniques for each guard's control and intervention group determinant determinants.

The calculation of the number of samples according to the Slovin formula is 34.5 rounded up to 35 respondents so it is carried out for 35 intervention groups and 35 control groups. Sampling was done by *a cluster-randomized trial* where the control group consisted of 35 respondents, and the experimental group consisted of 35 respondents who were drawn representing each guardian/RT in Tumaratas 2 Village and the determination of the intervention and control groups were taken randomly.

Select samples in accordance with the inclusion criteria established for the control group, namely the village of Tumaratas Dua. In addition to the team and research assistants, the Head of the Village and the Head of the Guard assist with this activity as field assistants. Next, compile a list of potential respondents who are dispersed among the four village guardians of Tumaratas 2. Then, organize samples in each guard and determine the control and intervention groups using random sampling techniques at each guard. After selecting the sample, the researcher undertakes individual instruction. The first day explains the research activity, namely the purpose and objectives, and benefits of the research to the respondent, giving the

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respondent informed consent to be filled in the second day conducting a pre-test to the respondent. Each respondent is given the same time to answer each question. If the respondent has difficulty answering questions, the research team and research assistants explain without influencing the respondent, then providing education to the respondent. When the facilitator's education program plays a video on the impact of alcohol use on the human body using the local language, namely Tontemboan, the respondent is welcome to watch the video and even the respondent may repeat the video given. The third day evaluated the respondents whether they understood the video that was given through a short interview and then allowed the respondents to increase their knowledge about the impact of alcohol use on the human body by opening a discussion forum privately. Researchers explore habits/culture that are good or bad for health. Researchers give praise to habits that have a good impact on health and provide reinforcement or re-explanation if habits are found that have a bad impact on health. The fourth day evaluates whether the respondent understands the video that has been given through a short interview, and gives time for things that are still to be discussed, then conducts a posttest on the respondent's attitude.

Researchers used a Paired T-test and an independent t-test. Data were processed using the IBM SPSS *Statistics* 21 program with a significance level of 95% ($\alpha = 0.05$).

3. Result And Discussion

Univariate Analysis
Characteristics of the respondents were education and age. The overall job adoption is farmers, so it is not included in the analysis.

Table 1. Distribution of Respondents by Education and Age in the Minahasa Community July-October 2020 (n = 70)

Characteristics		of Experimental Group (n = 35)		Control Group (n = 35)		Total	
		n	%	n	%	N	%
Education	Elementary School	3	8.5	3	9	6	9
	Middle School	8	23	6	17	14	20
	High School	24	68.5	26	74	50	71
Age	20-30	7	20	10	29	17	24.3
	31-40	26	74	22	63	48	68.6
	41-50	2	6	3	8	5	7.1

71% of respondents with an education level of SMA 50 or less, as shown in the table 1 above, have an educational background. The lowest percentage of respondents is SD 6, or 9%. 68.6% of the respondents were between the ages of 31 and 40. The lowest rate, 7.1%, was found in the age bracket of 41 to 50 years old.

Bivariate Analysis
Before the bivariate analysis, the normality test was performed to meet the requirements of the paired t-test and the independent t-test. Furthermore, the homogeneity test was carried out to determine the equivalence of variance in the control and intervention groups

Table 2. Data Normality Test of Attitudes and Behavior of Cap Tikus Drinking Culture in Minahasa Communities July-October 2020 (n = 70)

Variable	Mean	SD	P-Value

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Control Group			
Score Pretest Attitude	18.97	2.662	0.48
Score Posttest Attitude	41.03	6.167	0.49
Score Pretest Behavior	14.00	1.188	0.08
Posttest Behavior Score	5.71	1.178	0.22
Experiment Group Pretest			
Attitude Score	18.94	3134	0:08
posttest attitude Score	53.54	4919	0:06
Score Behavioral pretest	**13:23**	**1087**	**0:07**
posttest scores behavioral	**20.69**	**1178**	**0:22**

According to the results of the table's data normality test, the data are normally distributed. The test for data homogeneity endeavors to determine if the intervention group and the control group have comparable data. This test is also used to demonstrate that changes in attitudes and behaviors are not attributable to respondent variation, but rather to the intervention being implemented.

Table 3. Homogeneity Test of Attitudes and Behaviors of Cap Tikus Drinking Culture in the Minahasa Community July-October 2020 (n = 70)

Variable	P-value
Attitude	0.83
Behavior	0.64

The results of the homogeneity test in table 3 indicate that the respondent's attitude and behavior prior to intervention have a homogeneity value greater than 0.05. The results of this test suggest that the initial attitude and behavior of the experimental group is identical to that of the control group.

Table 4. The Difference in Mean Attitudes towards Cap Tikus Drinking Culture before and after Intervention in the control and Intervention group in the Minahasa community July-October 2020 (n = 70)

	n	Mean	SD	P-value
Control group				
Pre Test	35	18.97	2,662	0.0001 *
Post Test	35	41.03	6.167	
Intervention Group				
Pre Test	35	18.94	3,134	0.0001*
Post Test	35	53.54	4,919	

* paired t-test

Table 4 demonstrates, with a p-value of 0.0001, a significant difference between the mean attitudes of the control and intervention groups before and after the intervention.

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Table 5. The Difference in the mean behavior of Cap Tikus drinking culture before and after intervention in the control and Intervention group in the Minahasa community July to October 2020 (n = 70)

	n	Mean	SD	P-value
Control group				
Pre Test	35	14:00	1.188	0.0001 *
Post Test	35	15.71	1.178	
Intervention Group				
Pre Test	35	13:23	1.087	0.0001*
Post Test	35	20.69	2,166	

* paired t-test

Table 5 above shows the difference significant results mean values of behavior before and after the intervention with a p-value of 0.0001 in a control and intervention groups

Table 6. Difference score Attitudes and Behavior toward Drinking Culture Cap Tikus in the Two Groups Receiving Oral Education Educational Models and Leaflets with Guided Oral Education Models and Video

	n	mean	SD	95% CI of the Difference		P-value
				Lower	Upper	
Attitudes						
Education with leaflet model (Control)	35	41.03	6.167	-15.175	-9.854	0.0001 *
Guided education model and video (Intervention)	35	53.54	4,919	-15,177	-9.851	
Behavior						
Control	35	15.71	1.178	-5.803	-4.140	0.0001*
Intervention	35	20.69	2.166	-5.808	-4.135	

*Independent t-test

Table 6 demonstrates that there are significant differences in attitude scores between the experimental group lecture and video model and the control group lecture and leaflet model, with a p-value of 0.0001, and that there are significant differences in behavior scores between the experimental group lecture and video model and the control group lecture and leaflet model, with a p-value of 0.0001.

Multivariate Analysis

Before to the multivariate analysis, a correlation test was carried out between the characteristics of the respondents and the attitude and behavior scores.

Table 7. Bivariate Analysis of Age, Education and Intervention Models of Attitudes and Behaviors of Cap Tikus Drinking Culture in the Minahasa Community July-October 2020 (n = 70)

	Variable	P-value
Age		
	Attitude	0.145
	Behavior	0.698

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Education		
	Attitude	0.601
	Behavior	0.55
Intervention Model		
	Attitude	0.000
	Behavior	0.000

Based on the results of statistical tests in table 7, it is concluded that the independent variable age and intervention model will be included in the multivariate modeling on the dependent variable attitude. As for the dependent variable behavior, the multivariate test will not be carried out because the bivariate test results do not meet the requirements (more than 0.25) for both age and education. Multivariate statistical tests using linear regression can be seen in the table below:

Table 8. Independent Variable Linear Regression Analysis of the Attitude of Respondents to the Minahasa People from July to October 2020 (n = 70)

Step	Variable	Coefficient	correlation of coefficient	p-value	R^2
1	Age	0.246	0.151	0.059	0.587
	intervention model	12.430	0.746	0.000	
	Constant	20.322		0.000	

Statistical test results on Table 8. above produces 1 modeling stage. Regression analysis in this study uses the method *Backward* where variables with a p *value of* more than 0.05 will be automatically removed from the modeling sequentially based on the p-value largest. In modeling, the age variable has the p *value* largest (0.059) so it is excluded from modeling, thus only the guided education intervention model variable and video P-Value <0.05 (0.000). The R *square* (R^2) of 0.587.

The conclusion from this multivariate test is the intervention model variable guided education and videos are the most influential on people's attitudes towards drinking alcohol. The model can predict that each respondent is given a model *intervention* through guided education and video, then the attitude score will increase by 12,430 after being controlled by the age variable.

4. Discussion

Research conducted was experimental research using the "Quasi-Experimental Design". This research was conducted on the community in Tumaratas Dua village. The two research groups, namely the control and experimental groups, were taught the same material, namely education about the effects of alcohol on body health. The treatment given to the two groups was different. The treatment given to the experimental group was learning using audiovisual methods in the form of videos and simulations, while the treatment in the control group was learning using leaflets. The experimental and control groups were given pretests. The number of respondents who took part in the pretest was 35, and the control group was 35 respondents. The pretest results showed that all experimental and control groups scored less.

The results of this study are in line with research conducted by Richards, DK (2019) who said that the strategy used to reduce alcohol consumption behavior is by providing education, namely by combining it with giving motivation to people who are addicted to alcohol. This method can reduce a person's interest in alcohol use. The behavior of drinking alcoholic

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beverages can also cause injury to a person. Clare PJ, Aiken A, Yuen WS, Boland V, Wadolowski M, et al (2019).

Cassidy RN, Bernstein MH, Magil M, Mackillop J et al in their research said that a person's age affects the level of alcohol consumption. Young age is the age at which the intensity of alcohol consumption is higher than that of old age. High curiosity and even alcohol addiction. Besides, young age affects the motivation to consume alcohol (Lui CK, Kerr WC, Yuye NM, 2018; Perotte & Zamboanga, 2021).

The use of video-based training techniques is highly effective at inducing individual knowledge and behavior changes. This is because the video method of imparting skills is so effective. Videos are becoming an increasingly useful educational tool. According to the findings of the Kobra (2016), Anal (2019), and Hendriks et al. (2020) study, the video approach differed significantly from the lecture method. Additionally, this method impacts performance and enhances the quality of life.

Due to the fact that people live in a culture where visual abilities and the ability to memorize information are perpetually utilized, the use of audiovisual sources improves comprehension and arouses a sense of curiosity about topics (Okaru et al., 2019; Narasimha et al., 2020; Jangannathan et al., 2019). As an educational instrument, video technology has enabled health professionals to innovate in their knowledge, increase student interest, and promote effective learning (Youth 2017; Henson et al., 2020; Pitzer et al., 2019). Health education can be given to change a person's behavior because of the habit of consuming alcohol. Health education can change an individual's perception of alcohol, develop knowledge, provide social and mental support so that individuals have the confidence to change behavior (Huerta MC, Borgonovi F, 2010; Calina et al., 2021).

Researchers argue that guided oral education models and local language educational videos provide significant results on changes in attitudes and behavior of respondents in drinking cap tikus culture. This happens because, in the provision of guided education, respondents receive assistance, receive an explanation when something is not clear at the time of education. Respondents were allowed to explore the habits or culture of drinking cap tikus that adversely affects health (Huang et al., 2019; Delirrad, 2020; Zhu et al., 2020). Respondents also received praise for habits that have a good impact on health. If you get a culture/habit that is not good for health, the researcher will give an explanation again about the bad effects of the Cap Tikus for health.

There were statistically significant differences in attitude scores between the control group, which received a lecture and leaflet model intervention, and the experimental group, which received a lecture and video model intervention, with a p-value of 0.0001 (t independent test). Furthermore, the t independent test found a p value of 0.0001 (significant difference) in behavior scores between the control group (lecture and leaflet model intervention) and the experimental group (lecture and video model intervention). As a result, we can draw the conclusion that guided education makes a substantial difference in the attitude and behavior of the cap tikus drinking culture in the community because there are noticeable differences between people's attitudes and behaviors before and after receiving the education.

5. Conclusion

There are differences in the value of mean attitudes and behavior between the control groups taught using oral method and leaflet compared with the intervention group using lecture methods and leaflets and local language educational videos. There were significant differences in attitudes and behavior between the control and intervention groups before and after being given education with different methods.

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This means that the educational method/model greatly influences the Attitudes and Behaviors of the Minahasa Community Drinking Cap tikus Culture. Guided education coupled with local language educational videos is very good to use to influence the cultural attitudes and behavior of drinking cap tikus in the in the community.

Acknowledgments

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