

## THE RELATIONSHIP BETWEEN THE COGNITIVE FACTOR AND SOCIAL ENVIRONMENT WITH HIV/AIDS CHECK-UP ACTIVENESS RATES AMONG CROSS-DRESSERS IN GORONTALO

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### Abstract

In Gorontalo, the total number of HIV/AIDS cases in June 2021 is 64, and homosexuals occupy the highest position, with 34 patients. The term “homosexuals” is historically used to diagnose medical/mental illnesses, and cross-dresser is an alternative term to replace it. The number of cross-dressers in Gorontalo is around 350. Based on the CDC, an HIV check-up is the first step in getting care, treatment, and controlling the disease for people living with HIV and keeping others safe. The novelty in this study was to see the relationship between cognitive factors and the social environment with HIV/AIDS check-up activeness rates among cross-dressers in Gorontalo. This research aims to determine the significant relationship between the cognitive factor and the social environment with the activeness of HIV/AIDS examinations in cross-dressers in Gorontalo, Indonesia. The population is 60 people and the sample is 52 cross-dressers. Independent variables used are the cognitive factor (knowledge and attitude) and social environment (support from fellow cross-dressers), while the dependent variable is the HIV/AIDS check-up activeness rates among cross-dressers. This research found that most of the respondents were cross-dressers aged between 25 and 29 years and participants mostly went to Community Health Center for HIV/AIDS check-ups. However, some participants did not go or find out how to do the HIV/AIDS check-up. The conclusion that cognitive factor (knowledge and attitude) was not associated with HIV/AIDS check-up activeness rates among cross-dresser because they failed to reject the null hypothesis. In comparison, social environment (support from fellow cross-dressers) was associated with HIV/AIDS check-up activeness rates among cross-dressers because it rejected the null hypothesis.

**Keywords:** HIV/AIDS; Knowledge; Attitude; Support; Cross-dresser.

### INTRODUCTION

Human Immunodeficiency Virus (HIV) is a retrovirus that can be transmitted directly from a mother to her child during pregnancy, childbirth, or breastfeeding or from HIV-positive blood, semen, or vaginal fluids. The most advanced stage of HIV infection is

Acquired Immunodeficiency Syndrome (AIDS), which is people with a CD4 count of fewer than 200 cells/mm<sup>3</sup> or someone with AIDS-defining symptoms (1). According to the Ministry of the Health Republic of Indonesia, HIV/AIDS cases have increased. Until 2021, the cumulative number of HIV cases was around 427 thousand

People, while the cumulative number of AIDS cases was around 131 thousand. It also shows that the homosexual group had the second-March 2021, based on risk factors, people living with HIV/AIDS (PLWHA) were primarily homosexuals, 27.2% (2). In Gorontalo, the total number of HIV/AIDS cases in June 2021 is 64, and homosexuals occupy the highest position, with 34 patients (3). Homosexual includes gay and other men who have sex with men (MSM). Homosexual men dressed in women's clothing and adopted women's roles and behaviors are called transvestites. Men with this term identify themselves as transvestites, and socialize with other transvestites (4). However, since the term is historically used to diagnose medical/mental illnesses, cross-dresser is an alternative term to replace it (5,6).

The number of cross-dressers in Gorontalo is around 350 (7). Even though it is only a few, they tend to target young men who may be a "bridge" to the general population. Therefore, a cross-dresser who indeed is gay and MSM has the potential to significantly impact HIV/AIDS in the country (8). Based on the Centers for Disease Control and Prevention (CDC), an HIV check-up is the first step in getting care, treatment, and controlling the disease for people living with HIV and keeping others safe. The CDC website said that HIV

highest risk factor for transmission after heterosexuals, with 17.5% for HIV cases and 8.2% for AIDS. In addition, from January until check-up results showing negative results indicate cross-dressers do not have HIV and can continue to take preventative measures. Meanwhile, those with positive results indicate that they have HIV but still can take steps to protect their health and others. Do not do check-ups often can affect the prevention efforts (9).

Previous research showed several factors related to HIV/AIDS check-ups. First, research showed that knowledge regarding HIV/AIDS significantly correlates with HIV/AIDS check-ups, which is people with inadequate knowledge regarding HIV/AIDS manifested negative attitudes toward PLWH (People Living With HIV). Moreover, they also engaged in risky practices that might predispose them to HIV transmission because they did not know where to get tested for HIV or had heard about HIV check-ups (10–12).

The other factors related to HIV/AIDS check-ups are individuals' attitudes toward HIV/AIDS prevention. Research conducted in Indonesia (Kediri) showed that pregnant women's attitudes significantly correlate with HIV/AIDS check-ups (13). Similarly, the previous research also indicated that people with adequate knowledge and a positive attitude were

more likely to go for HIV checking (14,15). Likewise, Kalichman et al. (2003) explained that people with negative attitudes toward the disease were less likely not to (16). An attitude relates to a person's perception and evaluation of things or people, a predisposition or response to something positive or negative (17).

Social support from their peer for doing the check-up for HIV/AIDS prevention or treatment also experienced a significant relationship with HIV check-ups. Previous research about social support for HIV/AIDS through the peer social group showed that a variety of social support, such as emotional support, self-esteem support, network support, and tangible assistance, was essential in helping them survive (18). Furthermore, environmental influences, such as stigma, significantly impact HIV/AIDS, which harms the quality of life of PLWHA (People Living With HIV/AIDS) (19,20). This kind of stigma often makes the person choose not to interact with others or decline to seek help to do check-ups. As a result, the level of activeness of HIV/AIDS testing decreases, and the number of distributions increases.

Knowledge and attitude are often referred to as cognitive factors. Cognitive factors and perceptions of the surrounding social environment can affect an individual's behavior.

Meanwhile, the perception of the surrounding social environment is their demand to give positive or negative feedback, happy or unhappy, and so on (21). Based on the description above, this research aims to determine the significant relationship between the cognitive factor and the social environment with the activeness of HIV/AIDS examinations in cross-dressers in Gorontalo, Indonesia.

### **RESEARCH METHODS**

This research was conducted in Gorontalo City in early 2022. The design used in this research is a cross-sectional study, a type of observational study design that simultaneously measures the outcomes and the participants' exposures (22). Independent variables used in this research are the cognitive factor (knowledge and attitude) and social environment (support from fellow cross-dressers), while the dependent variable is the HIV/AIDS check-up activeness rates among cross-dressers. The population is all the cross-dressers in the cross-dresser community in Gorontalo City, which is 60 people. The sampling technique used is purposive sampling, with the sample characteristic being cross-dressers with sex workers or those with sexual risk behavior. The number of samples, using the Slovin formula, is 52 cross-dressers.

The data used are primary and secondary. Primary data was collected using a questionnaire to the community, while secondary data was obtained from the Ministry of Health - Gorontalo Province. The questionnaire has been tested for validity using the  $r$  value and reliability using the *Alpha Cronbach's* value. Data collection techniques are as follows: (a) Met respondents, who are cross-dressers and fit the inclusion criteria, and asked if they were willing to be the research sample. They will not be the sample of this research if they are unwilling to do it; (b) Sample was required to fill out a questionnaire. While the respondent filled it out, the researchers accompanied them; (c) The completed questionnaires are returned simultaneously to ensure they have been thoroughly filled out. If there are uncompleted data, the researcher immediately clarifies to the respondent that the criteria for the processed questionnaires are filled according to the instructions, clear and complete, and without missing sheets. The clearance ethics came from The Faculty of Sport and Health, Universitas Negeri Gorontalo.

The first analysis used in this research is a univariate analysis, which presents each

variable separately with descriptive analysis. Secondly, this research used bivariate analysis to explore individual associations between the dependent and independent variables using the Chi-Square test. The formula for calculating this test shows below, where  $O$  stands for the observed frequency and  $E$  stands for the expected frequency (23).

$$\chi^2 = \sum_{i=1}^n \frac{(O_i - E_i)^2}{E_i}$$

The null hypothesis for this test is “there is no relation between the dependent and independent variable”, which rejects the null hypothesis if the  $p - value < \alpha$  (23).

## RESULTS

### Univariate analysis

The first analysis used is a univariate analysis by doing a descriptive analysis of the characteristics of all respondents. Respondents to this research comprised cross-dressers between 15 to 44 years old with different educational statuses, jobs, and places or ways to do their HIV/AIDS check-ups. The result of the analysis shows in table 1.

**Table 1. Characteristics respondents**

Category	Frequency	Percentage
<i>Age group</i>		
15 - 19	4	7.7
20 - 24	12	23.1
25 - 29	26	50.0
30 - 34	9	17.3
35 - 39	0	0
40 - 44	1	1.9
<i>Educational status</i>		
Junior High School	8	15.4
Senior High School	34	65.4
College	10	19.2
<i>Job type</i>		
Entrepreneur	33	63.5
Hairstylist	2	3.8
Salon worker	7	13.5
Labor	1	1.9
Employee	6	11.5
College student	3	5.8
<i>Place/way to do the HIV/AIDS check-up</i>		
Community Health Center	18	34
Hospital	2	3.8
Medical Clinic	7	13.5
VCT Mobile	15	28.8
Did not go/find out how	10	19.9

*Source: Primary data*

Table 1 shows that most respondents were cross-dressers aged between 25 and 29 years

(26; 50%). A vast majority of the respondents went to Senior High School (34; 65.4%) and

were entrepreneurs at the time of the research (33; 63.5%). Participants mostly went to Community Health Center for HIV/AIDS check-ups (18; 34%). However, some participants did not go or find out how to do the HIV/AIDS check-up (10; 19.9%).

**Bivariate analysis**

The second analysis used is a bivariate analysis using chi-square to determine the association between cognitive factors (knowledge and attitude) and social environment (support from fellow cross-dressers) with HIV/AIDS check-up activeness rates among cross-dressers. Table 2 shows the result of the test.

**Table 2. Factors associated with HIV/AIDS check-up activeness rates among cross-dressers**

Variable	HIV/AIDS check-up activeness				p-value
	Inactive		Active		
	Frequency	Percentage	Frequency	Percentage	
<i>Knowledge</i>					
Poor	0	0	0	0	0.626
Fair	1	25	3	75	
Good	10	20.8	38	79.2	
<i>Attitude</i>					
Poor	0	0	0	0	0.580
Fair	7	21.9	25	78.1	
Good	4	20.8	16	80.0	
<i>Support from fellow cross-dressers</i>					
None	6	54.5	5	45.5	0.006
Get a support	5	12.2	36	87.8	

Source: Primary data

Table 2 shows that cognitive factor (knowledge and attitude) was not associated with HIV/AIDS check-up activeness rates among cross-dresser because they failed to reject

the null hypothesis ( $p\text{-value}_{\text{knowledge}} = 0.626$ ,  $p\text{-value}_{\text{attitude}} = 0.580$ ). In comparison, social environment (support from fellow cross-dressers) was associated with HIV/AIDS check-

up activeness rates among cross-dressers because it rejected the null hypothesis ( $p$ -value support from fellow cross-dresser = 0.006).

### DISCUSSION

Table 2 shows that most respondents have sufficient knowledge regarding HIV/AIDS and those who actively do the HIV/AIDS check-up more than those who do not. Furthermore, the bivariate analysis shows that cognitive factors (knowledge and attitude) were not associated with HIV/AIDS check-up activeness rates among cross-dressers. It means that having sufficient knowledge and an appropriate attitude toward HIV/AIDS prevention does not necessarily increase the activeness of HIV/AIDS check-ups among cross-dressers. Those who do not actively do HIV/AIDS check-ups can be caused by several factors, such as the lack of desire to do the check-up, even though the impacts of risky sexual behavior are widely known. Previous research supports this result that many unidentified factors possibly have a more critical impact in determining a cross-dresser's willingness to participate in HIV/AIDS check-ups (24).

In this research, 11 respondents were not actively doing the check-up, including those who went to college, and most have good knowledge regarding HIV/AIDS. Some of these respondents' inactivity in the HIV/AIDS check-

up was due to shyness and anxiety about knowing the results after the check-up, such as individuals' condition that may get worse or their insecurity and disturbed socialization needs. Insecurity doing socialization referred to social stigma around PLWHA. This result is in line with previous research that said those with a higher stigma about HIV check-ups are less likely to accept testing (25,26). This stigma is said to be the leading cause of HIV/AIDS which remains a significant health problem worldwide. Previous research shows that HIV stigma can become a barrier for PLWHA to access health services (27–29). In addition, in this research, those who do not actively do it are because they have inadequate information about the check-up. Consistent with previous research, the expansion of HIV/AIDS check-up services and education by the government and non-governmental organizations is undoubtedly a reason for the HIV testing services (30). It means that the more information obtained about the HIV/AIDS check-up, the more people do it.

While the cognitive factor is not associated, the social environment in this research, which supports fellow cross-dressers, shows that it is associated with HIV/AIDS check-up activeness rates among cross-dressers. Table 2 shows that most cross-dressers get support from fellow cross-dressers to do the

HIV/AIDS check-up. Another reason people choose not to do HIV/AIDS check-ups is their lack of confidence. Unless they have enough confidence, the cross-dresser will choose not to. Trust or belief in oneself and confidence can also be obtained by having a good social environment, including family or friends. Individuals' Self-confidence and their environment are crucial in their lives because positive social relationships and social support help shape the development of self-confidence (31–33). This means cross-dressers who get support from fellow cross-dressers around them or their social environment will likely be encouraged and confident to do the HIV/AIDS check-up. This statement is consistent with previous research that said that social groups provide emotional support, mutual understanding, self-confidence support, network support, intensive communication and strong friendship, and tangible assistance, namely treatment access or business skills (18,34). In addition, it was found in this research that those who have support from fellow cross-dressers and actively do the HIV/AIDS check-up are people using VCT services that make it easier for them to do the check-up. It is consistent with previous research that said this service was associated with peer groups that used VCT or had a partner (35).

## CONCLUSION

This research found that most of the respondents were cross-dressers aged between 25 and 29 years and participants mostly went to Community Health Center for HIV/AIDS check-ups. However, some participants did not go or find out how to do the HIV/AIDS check-up. The bivariate analysis showed that cognitive factor (knowledge and attitude) was not associated with HIV/AIDS check-up activeness rates among cross-dresser because they failed to reject the null hypothesis. In comparison, social environment (support from fellow cross-dressers) was associated with HIV/AIDS check-up activeness rates among cross-dressers because it rejected the null hypothesis.

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