The Character of Physical Education Teachers and Mass Media on Knowledge and Student Attitudes about HIV/AIDS

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Article Info	Abstract
	More than 50% of AIDS cases occur at the age of adolescence to adulthood. Therefore early knowledge should be given to prevent HIV/AIDS. The objectives of this study were to know the effect of roles of physical education teacher toward the students knowledge, to know the roles of mass media to students knowledge, to know the roles of physical education teacher toward students' attitude, the roles of mass media to students' attitude, students' knowledge to students' attitude in understanding prevention and danger of HIV/AIDS in Grobogan District. The population of this study was the whole students in Grade, i.e. 11 State Senior High Schools in Grobogan District or 3,397 students. The instruments used to collect data are questionnaires. The technique of data analysis that used was related to respondent description and description of research variables. (1) The roles of physical education teachers had no significant effect toward the students' knowledge, (2) The roles of mass media had positive and significant effect toward students' knowledge, (3) The roles of physical education teachers had positive and significant effect toward students' attitude, (4) The role of the mass media proved to have no significant effect toward students' attitudes, (5) Students' knowledge had positive and significant effect e toward students' attitude; variable of students' knowledge could not mediate the effect of physical education teacher toward students' attitude on HIV/AIDS; and (7) Students' knowledge could mediate the effect of physical education teacher toward students' attitude on HIV/AIDS.

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INTRODUCTION

AIDS (Acquired Immune Deficiency Syndrome) is a disease of human immune deficiency caused by a virus called HIV. Human Immunodeficiency Virus (HIV) is the cause of Acquired Immune Deficiency Syndrome (AIDS). Once inside to the human body, HIV immobilizes the immune system quickly. Thus, people who have been infected by HIV will have very low immunity system. This condition caused the patient will be attacked various types of diseases easily. (Yuliyanasari, 2017).

Officially the first HIV/AIDS case was identified in Indonesia on a foreign tourist in Bali in 1987. Since it was discovered in 1987, HIV/AIDS cases increased, in 2000 Indonesia has entered concentrated epidemic level i.e in high-risk groups, prevalence HIV/AIDS exceeds 5% (BKKBN, 2008). The number of HIV/AIDS cases which reported from January to September 2014 was 24739. In quarter of July-September 2014 , there was an increase in reported cases, it was 7511. Cumulatively in Indonesia, from April 1, 1987, to September 2014, the cases of HIV/AIDS were 206095 and the number of deaths due to AIDS were 9796. The largest number of male patients were as much as 30001 and 16149 in women with high spreaded through heterosexual (DG of DC & EH Ministry of Health, 2014). The total of 50,7% of AIDS cases from 1987 to September 2014, occurred at the age of 15-29 years old (Husaini 2017).

A number of 3 cases as the first HIV/AIDS case was discovered in early 2003 at Grobogan District. While in 2010 there was a large surge the number of people who infected HIV/AIDS (PLWHA) in Grobogan district. Research conducted by Qomariyah in 2002 revealed that information on reproductive health education and HIV/AIDS in adolescents was obtained from friends (41%), mass media (print and electronic) (25.1%), teachers (20.9%) and parents (9.7%) (Qomariyah in Tirtawati, 2005).

According to Putri N (2016) mass media is an environmental factor that changes one's behavior through the classical pronunciation process, the operand or the imitation process (social learning). While the definition of mass media according to Hafied Cangara (2002) mass media is a tool used in the delivery of messages from sources to audiences (recipients) by using mechanical communication tools such as newspapers, radio, and television. According to Apriadi Tamburaka (2012) mass media is a means of delivering communications and information that disseminate information massively and can be accessed by wide society. By the description above, it also can be used as a media to find out information for students who want to increase their knowledge about the dangers of HIV/AIDS.

Based on the research of Meidy Albert Tangkua & Tandiyo Rahayu (2015), students who have a good perception of learning physical sports and health education (PE), their understanding in learning physical sports and health education (PE) is good too. Physical education teacher is expected to be able to convey material about HI /AIDS to the students of XI grade, physical education teacher has a big contribution to the success of learning physical sport and health education (PE) about HIV/AIDS at school. The supporting school's books in Galileo Galilei, Soegiyanto K. S., & Setya Rahayu (2014) studies, the book as a supporting students learning already has the feasibility of the contents with the appropriate category, the component of the presentation feasibility also has a very appropriate category. According to Sri Alaswati (2016) Teachers also must be able to plan the use of learning media adapted to the material and characteristics of children, the media is easily understood by the students, tailored to the objectives of learning, material's suitability, tailored to the material, involving students with made interesting. It is hoped that the additional role of an optimal physical education (PE) teacher can provide an early foundation of students' education of HIV/AIDS. By increasing the student knowledge about HIV/AIDS it is expected to impact the changes of the students attitude, able to prevent and avoid risky behavior of HIV/AIDS (Marsiglia 2013).

The preliminary study at SMA Negeri 1 Toroh Kab. Grobogan by conducting interviews with two physical education teachers, One of the teachers has already delivered healthy living culture materials about the risk of HIV/AIDS but there is one teacher who has not provided healthy living culture material about HIV/AIDS in XI grade. In addition to interviews with teachers, the questionnaires were also conducted on 33 students of grade XI Social 1 and 35 students of grade XI Sciences 1 on materials science, prevention, transmission and attitudes of students to the high risk of HIV/AIDS in Grobogan District. Based on the data produced, there are 18 students of social education (IPS) 17 science students who did not understand the material about science, prevention, transmission of HIV/AIDS. While 15 Social students and 18 Sciences (IPA) students have understood the material about HIV/AIDS but have not been able to identify the problems and the attitudes in the community about the high risk of HIV/AIDS in Grobogan District.

The aims of this research are: (1) to know the role of teacher of PE on students' knowledge and attitude about HIV/AIDS, (2) knowing the role of mass media on students' knowledge and attitude about HIV/AIDS, (3) knowing the role of students' knowledge and attitude about HIV/AIDS.

METHODS

Type of this research is explanatory research, that is research which explains the relation between variables or hypothesis which has associative description, that is research which aims to know the relation between two variable or more (Sugiyono, 2012). The method of associative research is used to analized the impact of the teachers' role and mass media on the education and the students' attitude in understanding the prevention and the danger of HIV/AIDS in Grobogan District.

The population in this study is all of the students of grade XI, which consist of 11 SMA Negeri in Grobogan District with a total of 3,397 students. The samples in this study were taken by the students of grade XI SMA Negeri in Grobogan District of 317 respondents. Sampling technique in this research is a probability sampling. It is a technique used if the population member/element not homogeneous and stratified proportionally. (Sugiyono, 2012).

The variables used in the research instrument are (1) The character of the teacher of the physical education (PE) teachers, as the contribution of the teacher to the success of the students by encouraging the students to dare to do the right thing and get use to take the responsibility for the actions has taken, (2) The character of mass media is used as a messenger associated with understanding prevention and the dangers of HIV/AIDS in the community, (3) Student's knowledge is the knowledge that have by them for understanding the prevention and danger of HIV/AIDS, (4) Student attitudes is a tendency of students' behavior to do things in a certain way in understanding the prevention and dangers of HIV/AIDS.

Path analysis is a statistical analysis technique developed from multiple regression analysis. In mathematically, this analysis is multiple regression analysis of standardized data. Thus, statistical software capable of performing multiple regression analysis can also be used for path analysis (Riduan, 2013). The main subject of this analysis is the correlated variables. This analysis based on the relation among variables which has determined previously by the researcher. The modeling is based on hypotheses about the variables observed.

The hypothesis of this research is done by using Multiple Linear Regression statistics to know the independent variable to dependent variable, that is the character of teacher (X_1), and the character of mass media (X_2), student's knowledge (Y_1) and student's attitude (Y_2).

RESULTS AND DISCUSSION

The result of linear regression analysis of the relationship between independent variable to dependent variable of research is as follows:

Tabel 1. Results of Linear Regression Analysis Model 1: Student Knowledge

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	10,632	5,593		1,901	,058
The role of teacher PE	,152	,097	,090	1,573	,117
The role of mass media	,864	,085	,581	10,172	,000

Tabel 2. Result of Linear Regression Analysis Model 2: Student Attitude

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	26,196	3,052		8,583	,000
The role of teacher PE	,464	,053	,509	8,825	,000
The role of mass media	,040	,053	,050	,752	,453
Student knowledge	,088	,031	,163	2,869	,004

The results as in the above table can be interpreted into the linear regression equation model as follows:

$$Y_1 = 0{,}09X_1 + 0{,}581X_2$$
$$Y_2 = 0{,}509X_1 + 0{,}05X_2 + 0{,}163Y_1$$

The above structural equations can be interpreted as follows: (1) The variable character of the physical education teachers (PE) has a positive effect of 0.09 on the students' knowledge. This means that if the physical education teachers (PE) has an increasing role, it will increase the students' knowledge of HIV/AIDS by an increase of 0.09 (9%) from the prior level of student's knowledge, (2) The mass media variable character has a positive effect of 0.581 on the students' knowledge. It means that if mass media has an increasing character it will increase students' knowledge of HIV/AIDS by an increase of 0.581 (58.1%) from the level of prior student knowledge, (3) The role variable of the physical education teachers (PE) has a positive effect of 0,509 on the students' attitudes. This means that if the physical education teachers (PE) has an increasing character it will lead to a change the student attitudes toward HIV/AIDS getting better with an increase of 0.509 (50.99%) from the previous student attitudes, (4) The variable character of mass media has a positive effect of 0.05 on student attitudes. This means that if mass media has an increasing character, it will lead to a change the student attitudes better over HIV/AIDS with an increase of 0.05 (5%) from previous student attitudes, (5) The student's knowledge variable has a positive effect of 0.163 on the student's attitude. This means that if students' knowledge of HIV/AIDS is getting better, the student attitude will be better too based on the changes of their understanding about HIV/AIDS with an increase of 0.163 (16.3%) from the previous student's attitude.

The feasibility of the model is an initial test of multiple linear regression analysis, the purpose of this test is to make sure that the model of regression equations which submitted in the study to fulfill the model feasibility assumptions.

Tabel 3. F Test Multiple Linear Regression Model 1

Model	Sum of squares	df	Mean square	F	Sig.
Regression	15886,918	2	7943,459	111,051	,000b
Residual	22460,464	314	71,530		
Total	38347,382	316			

a. Dependent Variable: students' knowledge
b. Predictors: (Constant), the character of mass media, character of physical, sport and health education teachers (PE)

Tabel 4. F Test Multiple Linear Regression Model 2

Model	Sum of squares	df	Mean square	F	Sig.
Regression	4573,836	3	1524,612	72,400	,000b
Residual	6591,212	313	21,058		
Total	11165,047	316			

a. Dependent Variable: attitude of students
b. Predictors: (Constant), student knowledge, character of physical, sport and health education teachers (PE), the character of mass media

The results shown in tables 3 and 4 above show the magnitude of the F values of the two models. Model 1 has a value of F arithmetic

111.051 with a significance of 0.000 while model 2 has a value of F count 72,400 with significance 0.000. Both models proved to have a significant value smaller than 0.05 so that it can be said that both models have met the eligibility requirements

of the model and hence concluded both models are feasible.

Partial influence test is a test technique performed to prove the effect of each independent variable to the dependent variable. Partial effect test results are as follows:

Tabel 5. Partial Interagency Effect Test

Dependent variable	Independent variable	t value	Significance	Information
Student knowledge	The role of physical education, sports, and health teachers (PE)	1,573	0,117	Not significan
	The role of mass media	10,172	0,000	Significant
Student attitude	The role of physical education, sports, and health teachers (PE)	8,825	0,000	Significant
	The role of mass media	0,752	0,453	Not significan
	Student knowledge	2,869	0,004	Significant

Based on the results in Table 5 above can be concluded that: (1) Variable character of physical education teachers (PE) proved not significantly effect to student's knowledge variable, this is proved by significance value equal to 0,117 which is bigger than the maximum limit of significance 0,05, (2) Variable character of mass media proved significantly effect to student's knowledge variable, this is proved by significance value equal to 0.000 smaller than the maximum limit of significance 0,05. (3) Variable character of physical education teachers (PE) proved to have a significant effect on student attitude variables, this is evidenced by a significance value of 0.000 smaller than the maximum limit of 0.05 significance, (4) Variable character of mass media proved to have no significant effect on student attitude variable, this is proved by significance value equal to 0,453 which is bigger than the maximum limit of significance 0,05, (5) Student knowledge variable proved the effect significantly to student attitude variable, this is proved by significance value equal to 0,004 which is smaller than the maximum limit of significance 0,05.

Based on the results in Table 5, it is found the significance level of the effect of the variables used as the basis in the path analysis test. Based on the result of the Path Analysis test, it is known that the effect of the character of physical education teachers (PE) toward the knowledge of the students is not significant while the students

'knowledge has a significant effect on the students' attitude. Because the character of physical education teachers (PE) proved has no effect on the students' knowledge, it can be concluded that the student's knowledge variable cannot mediate the effect of the role of physical education teachers (PE) against the attitude of students.

While based on the results of Path Analysis test known that the effect of mass media character to the students 'knowledge is significant as well as students' knowledge affect the attitude of students significantly. Because the variable character of mass media, it proved to have a significant effect on students' knowledge as well as students' knowledge is significant to students' attitudes, then the path of effect of the mass media character to the students' knowledge is then to the students' attitude so that it can be concluded that the student's knowledge variable can mediate the effect of variable character of mass media to attitude of students.

Sobel test is done to verify the significance or not of indirect effect (mediation) is determined by using the test sobel, where this technique is done by first determining the amount of coefficient of direct effect between variables in the meditation path and the standard error of each variable.

Based on the calculation results obtained the following results: (1) The value of Z for the mediator character of physical education teachers

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(PE) → student knowledge → student attitude is 0.8981. (2) The value of Z for mediation character of mass media → student knowledge → student's attitude is 4.1399.

The quotation of significant or indirect effect through mediation is based on the requirement of Z > 1.96. Based on the calculation of Z value of mediation for both lines of indirect effect above, it can be concluded that: (1) Indirect effect The character of physical education teachers (PE) on the attitude of students with knowledge mediation students get the value of Z of 0.8981 who do not qualify Z value > 1,96 so it is concluded that the effect of indirect character of physical education teachers (PE) on the attitude of students with the mediation of student knowledge is not significant, (2) Indirect effect The character of mass media on the attitude of students with knowledge mediation students get the value of Z of 4.1399 that has met the Z value > 1,96 so it is concluded that the effect of indirect character of mass media on the attitude of students with the knowledge mediation significant student.

According to Sarma. H (2013) Teachers also stated that 6-8 grade students should not be given detailed knowledge about HIV/AIDS because they are still innocent and feared to fall into deviant behavior, while in grade 9-10 they can learn more detail about HIV/AIDS. In accordance with the results of this study, The effect of the character of physical education teachers (PE) against student knowledge is not significant, students can read books and learn so that students' knowledge increases about HIV/AIDS. With increasing, knowledge of students will affect students' attitudes about the dangers and views of HIV/AIDS in the community.

According to Kim (2016), French media bridges the gap between the medical community and public understanding of this disease by introducing scientific findings such as the origin of the disease or the identification of the virus that causes AIDS. The mass media also educates the role of society and helps to correct misunderstandings about medical mysteries and exaggerate the news related to the AIDS

epidemic. Media also creates perceptions beyond the media's perspective on social phenomena and national causes by addressing controversial issues such as the origin of the disease, the identification of the virus that causes AIDS, this makes the media's character very influential on the results of the effect of the role of the mass media, known that the mass media effect on knowledge students effect students' attitudes about the dangers and views of HIV/AIDS in the community (James F. Sallis, 2015).

CONCLUSION

Based on the results of the analysis and discussion about The Character of Physical education Teachers and Mass Media on Knowledge and Attitudes of Class XI Students on HIV/AIDS In High Schools in Grobogan District, it can be concluded as follows: The character of physical education teachers (PE) proved to have no significant effect on students' knowledge on HIV/AIDS, but the character of physical education teachers proved to have a significant effect on student attitudes; The character of mass media proved to have a significant effect on students 'knowledge, but the character of the mass media proved to have no significant effect on students' attitudes toward HIV/AIDS; The students 'knowledge proved to have a significant effect on students' attitudes but the students 'knowledge could not mediate the effect of the character of the teacher on the students' attitudes toward HIV/AIDS. Student knowledge can mediate the effect of the role of mass media on students' attitudes toward HIV/AIDS.

REFERENCES

Alaswati, S., Rahayu, S., & Rustiana, E. R. 2016. Evaluasi Pelaksanaan Pembelajaran Kurikulum 2013 PJOK. *Journal of Physical Education and Sports* 5(2): 111-119.

Ditjen PP & PL, Kemenkes RI. 2014. *Statistik Kasus HIV/AIDS di Indonesia dilapor s/d September 2014*. Jakarta.

Marsiglia, Flavio F., et al. 2013. Effects of an Undergraduate HIV/AIDS Course on

Students' HIV Risk. *Journal of HIV/AIDS & Social Services* 12(2): 172-189.

Galilei, G., Soegiyanto, K.S. & Setya, R., 2014. Analisis Isi dan Penyajian Buku Sekolah Elektronik (BSE) Pendidikan Jasmani Olahraga dan Kesehatan Kelas XI Sekolah Menengah Atas di Kota Semarang. *Journal of Physical Education and Sports* 3(2).

Hafied Cangara. 2002. *Pengantar Ilmu Komunikasi*. Jakarta: PT. Raja Grafindo Persada.

Husaini, H., Panghiyangani, R., & Saputra, M. 2017. Pengaruh Penyuluhan HIV/AIDS terhadap Pengetahuan dan Sikap Tentang HIV/AIDS Mahasiswi Akademi Kebidanan Banjarbaru Tahun 2016. *Buletin Penelitian Kesehatan* 45(1): 11-16.

Sallis, J. F., Owen, N., & Fisher, E. 2015. Ecological Models of Health Behavior. *Health Behavior: Theory, Research, and Practice* 5: 43-64.

Kim, Y. S. 2016. Domestic Contexts for Response to Global HIV/AIDS in France: Perception, Media Role and Civil Society. *International Politics* 53(3): 343-360.

Putri, N.N. 2016. Analisis Framing Pemberitaan LGBT dalam SKH Kompas Periode Oktober 2015-Maret 2016. *Journal of Doctoral Dissertation.* Yogyakarta: UPN Veteran.

Riduan, Engkos A.C. 2013. Cara Menggunakan dan Memaknai Path Analysis. Bandung: Alfabeta.

Sarma, H., Islam, M. A., & Gazi, R. 2013. Impact of Training of Teachers on Their Ability, Skills, and Confidence to Teach HIV/AIDS in Classroom: A Qualitative Assessment. *BMC Public Health* 13(1): 990.

Sugiyono. 2012. *Metode Penelitian Kuantitatif Kualitatif dan R&D*. Bandung: Alfabeta.

Tangkua, M.A. & Tandiyo, R., 2015. Peran dan Kedudukan Peserta Didik dalam Penyelenggaraan Mata Pelajaran Pendidikan Jasmani Olahraga dan Kesehatan (PJOK) di SMA (Studi Exploratif Mengenai Eksistensi PJOK dari Perspektif Peserta Didik). *Journal of Physical Education and Sports* 4(2).

Tamburaka, A. 2012. *Agenda Setting Media Massa.* Jakarta: PT Raja Grafindo Persada.

Tirtawati, Ayu Gusti. 2005. *Hubungan Sumber Sumber Informasi dengan Tingkat Kesehatan Reproduksi Siswa Tentang Kesehatan Reproduksi, Naskah Publikasi DIV Kebidanan*. UGM, Yogyakarta

Yuliyanasari, N. 2017. Global Burden Desease– Human Immunodeficiency Virus–Acquired Immune Deficiency Syndrome (HIV-AIDS). *Qanun Medika-Medical Journal Faculty of Medicine Muhammadiyah Surabaya* 1(1).