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ABSTRACT

A survey was conducted of 100 elementary and secondary teachers in northwestern Ohio concerning their knowledge of acquired immunodeficiency syndrome (AIDS). Results indicated a lack of basic knowledge of AIDS among the majority of respondents, with a mean score of 14 out of 21 points (67 percent). Several of the most frequently missed questions dealt with the transmission of the human immunodeficiency virus. Data indicated no linear relationship between various teacher demographic characteristics (such as age, grade taught, gender, and school type) and knowledge of AIDS. The 19 teachers who reported knowing someone with AIDS produced mean test scores similar to those who reported not knowing someone with AIDS. Community setting also seemed to have no influence on test scores. The study concludes that although more research is necessary, at the same time teachers need to be educated concerning AIDS. A copy of the survey questionnaire is appended. (JDD)

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### School Teachers' Knowledge of AIDS

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### Abstract

This study was conducted to test the level of teachers' knowledge of the Acquired Immunodeficiency Syndrome (AIDS). Teachers must be competent on this subject in order to educate their students. One hundred teachers from various grades and modalities voluntarily participated in the study. A survey was utilized for the testing instrument. Results suggest that teachers' have deficiencies in basic knowledge regarding this topic.

### School Teachers' Knowledge of AIDS

With the growing incidence of the Acquired Immunodeficiency Syndrome (AIDS), pressure is increasing to educate students on this subject. In order to facilitate such education, it is imperative that teachers of all grades and modalities have a basic knowledge of the AIDS syndrome. The purpose of this research study was to test the level of teachers' knowledge on the topic of AIDS.

According to the AIDS Action Council's 1993 reports, more than 171,000 people in the United States are known to have died of AIDS. The United States currently has 249,000 adults living with AIDS. This syndrome is the second leading cause of death among American men between the ages of twenty-five and forty-four. It is the fifth leading cause of death in women ages fifteen to forty-four ("AIDS in the", 1993).

These statistics show that AIDS is a major problem in America. Probabilities are high that school teachers will come in contact with students who have, or know someone with, AIDS. Preventative measures is also the recent trend of the health care system. The best way to prevent something is to be knowledgeable about it. Education is mainly distributed by teachers in schools, including education on topics such as

## AIDS.

The Acquired Immunodeficiency Syndrome is a secondary immunodeficiency syndrome resulting from the Human Immunodeficiency Virus (HIV) infection and is characterized by opportunistic infections, malignancies, neurologic dysfunction, and a variety of other syndromes (Berkow, 1992). HIV infection is established in human beings through the introduction of blood cells or bodily fluids from an infected individual into the bloodstream of an uninfected individual. This transmission can occur by blood transfusion, injections, or after mucous membrane exposure.

Although there exists a great deal of literature about AIDS, very little research could be found specifically on teachers' knowledge of AIDS. The Center for Disease Control (CDC) states that schools have the capacity and responsibility to help assure that young people understand the nature of the AIDS epidemic and the specific actions that can be taken to prevent the HIV infection (CDC, 1988). The CDC recommends continuing education and inservice programs for teachers to prepare them to provide AIDS education, as well as, a preservice component of instruction in the curriculum of colleges of education.

In 1990 Ballard, White, and Glascoff surveyed elementary education

majors and found that more than one-fifth of the sample did not believe they had a basic knowledge of AIDS. All of the subjects, however, felt that they would eventually have a child with AIDS in the classroom and that AIDS education should be taught in the elementary grades.

Ballard and White again conducted a study in 1993 determining the preparation of preservice elementary teachers regarding AIDS/HIV through professional education programs. About forty percent of the participants stated as to not having received any instruction about the cause, transmission, or prevention of AIDS.

Research shows that the AIDS population is growing fast and that education can be the key to prevention. More research is necessary to determine specifically what AIDS-related information teachers need to know in order to educate their students. Thus the hypothesis of this research is asking how much teachers know about AIDS and HIV.

## Method

### Subjects

One hundred school teachers served as voluntary participants for this study. Eight-six of these teachers were from public schools and twelve were from private schools, all representing kindergarten through the twelfth grade (see Table 1). Eighty-seven percent of the respondents

were female. Participating teachers were from schools located in northwest Ohio within a radius of fifty miles. These schools represented four different types of communities (see Table 2).

Table 1

Number of Participating Teachers Per Grade Level

Grade Taught	Number of Teachers
K-3	34
4-6	20
7-8	6
9-12	27
Principal	1
Special Education	7
<u>No Response Given</u>	<u>5</u>
Total:	100

Table 2

Number of Participating Teachers Per Community Setting

Community Setting	Number of Teachers
Metropolitan City	3
Suburban Community of large city	14
Small town or rural city	63
Farming area	13
<u>No Response Given</u>	<u>7</u>
Total:	100

### Apparatus

One thirty-three question survey was used as the measuring instrument for this study. This survey was developed with the assistance of an AIDS/HIV expert from Bowling Green State University. Six questions of the survey concerned demographics. Twenty-one questions concerned knowledge of AIDS/HIV. The final six questions dealt with AIDS education opportunities for teachers and students provided by their schools.

### Procedure

Several schools were selected from the northwest Ohio area. Permission for schools to participate in the research project was then obtained from school principals. Surveys with cover letters were given to the principal, who in turn, dispersed them to teachers who were willing to participate. Teachers were informed of the intent and purpose of the study. They were also assured that their name, school, and district would remain anonymous. Participants were given one week to complete the surveys. The surveys were then retrieved from the principals by the researchers. The rate of return of the surveys was approximately sixty percent.

### Results

Results of the testing section of the survey indicated a lack of basic

AIDS knowledge by the majority of respondents. The mean score on this section of the survey was 14 out of 21 points. This equates to approximately a 67 percent on a normal grading scale. Fifty-seven percent of the respondents received a score of 14 or below. Ninety-six percent of the respondents received a score of 17 or below, which is an 80 percent.

Several of the most frequently missed questions dealt with the transmission of the HIV virus. For example, the most frequently missed question asked if using household bleach to clean needles can prevent the transmission of HIV among drug users ( $M = 0.11$ ,  $SD = 0.41$ ). Other examples of frequently missed questions include if persons with AIDS are protected by handicapped laws ( $M = 0.21$ ,  $SD = 0.11$ ), and if a condom protects partners from HIV ( $M = 0.38$ ,  $SD = 0.49$ ).

The internal consistency of the survey was less than expected ( $\alpha = .48$ ). The survey most likely asks groups of questions which do not tap the same domains. Table 3 represents the responses of 100 teachers to 21 questions on AIDS knowledge. The complete questions can be found in the Appendix.

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Place Table 3 about here  
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Table 3

Responses of Teachers to Questions Testing Knowledge of AIDS

Question	Percent Correct	Percent Incorrect	Don't Know	No Response
7. bleach cleaned needles prevents transmission	11	54	35	0
8. can get when give blood	79	18	3	0
9. 2/thousand infected students	42	2	49	0
10. protected by handicapped laws	21	39	39	1
11. test positive within 1 week	84	0	16	0
13. can't permeate condom	69	20	11	0
14. transmitted during intercourse	99	0	1	0
15. condom lowers risk	92	4	3	1
16. symptoms	74	0	25	0
17. transmit by touch	71	27	2	0
18. condom protects	38	50	10	2
19. is terminal	92	5	2	1
20. man (+), then baby (+)	28	21	49	2
21. HIV=AIDS	93	1	5	1
22. caused by virus	84	6	8	2
23. 2/3 bisexual	33	16	49	2
24. transmittable fluids	95	1	3	1
25. washing prevents	93	0	6	1
26. valsoline damages	40	10	49	
27. caught by cough	81	3	14	2

A Pearson R study showed no linear relationship in various factors of the teachers to their test scores: age ( $r = .13$ ), grade taught ( $r = .11$ ), gender ( $r = .11$ ), number of students taught ( $r = .08$ ), school type ( $r = .07$ ), ( $df = 98, p > .05$ ). The 19 teachers who reported knowing someone with AIDS produced mean test scores ( $M = 14.8, SD = 2.1$ ) that were similar to those ( $n = 79, M = 14.0, SD = 2.5$ ) who reported not knowing someone with AIDS ( $t = 1.26, df = 96, p > .21$ ). An analysis of variance showed that community settings in which respondents teach had no difference in test scores ( $F(3,89) = .27, p > .84$ ).

### Discussion

Data from this study indicate that teachers have a great deal to learn about AIDS/ HIV. These findings are congruent with those of Ballard, White, and Glascoff (1990), in which elementary school teachers did not feel competent on the topic of AIDS. This research also demonstrates the need for providing AIDS education to teachers. Ballard and White (1993) showed this, as well, when a high percentage of respondents reported having received no instruction on AIDS.

Data also indicated no linear relationship between various teacher demographics and knowledge of AIDS. This shows some generalizability that AIDS education is needed in various settings for teachers of an array

of grades and modalities. The overwhelming proportion of female respondents, however, was unexpected due to the generous amount of high school respondents.

As mentioned in the results, the internal consistency of the survey used was less than desirable. Further analysis of the survey or a test-retest validation is suggested for future studies using similar surveys. Analysis of domains tested may be appropriate for replications.

Although more research is necessary, it is evident that teachers need to be educated on the AIDS topic. This is imperative as more and more individuals are becoming infected with the HIV virus. AIDS is preventable, and can be done so by education. Teachers must be competent on the topic of AIDS in order to pass such knowledge on to their students.

## Appendix

Edited Version of AIDS/HIV Survey for Teachers

Please circle 1 for True, 2 for False, or 3 for Don't Know to answer the following questions.

	True	False	Don't Know
7. Using household bleach to clean needles can prevent the transmission of HIV among IV drug users who share needles.	1	2	3
8. A person can acquire HIV by giving blood.	1	2	3
9. It is estimated that at least 2 per thousand college students may be infected with HIV.	1	2	3
10. Persons with AIDS are protected by the same laws that protect the handicapped.	1	2	3
11. If a person was tested a week after becoming infected with HIV, they would test positive.	1	2	3
12. There is no cure for AIDS at present.	1	2	3
13. The AIDS virus can not permeate a Latex condom.	1	2	3
14. A person with HIV can pass it on to someone else during sexual intercourse.	1	2	3
15. Using a Latex condom during sex can lower the risk of acquiring HIV.	1	2	3
16. Early warning signs of AIDS include: fever, night sweats, persistent cough, chronic fatigue, and loss of appetite.	1	2	3
17. HIV cannot be transmitted by touching someone with the disease.	1	2	3
18. A properly used condom protects the sexual partners from HIV.	1	2	3
19. AIDS is a terminal disease.	1	2	3
20. If a man tests positive for the antibody specific for HIV and his female partner tests negative, their baby will test positive and may develop AIDS.	1	2	3

	True	False	Don't Know
21. A person can be infected with HIV and not have the AIDS disease.	1	2	3
22. AIDS is an infectious disease caused by a virus.	1	2	3
23. Two-thirds of women with AIDS in the U.S. acquired the virus from sexual contact with bisexual men.	1	2	3
24. HIV may be transmitted by blood, semen, vaginal and cervical secretions.	1	2	3
25. Washing after sex can prevent the spread of the AIDS virus.	1	2	3
26. Oil-based lubricants (like Vaseline) can cause Latex condoms to break.	1	2	3
27. A person can get AIDS by being coughed or sneezed on by someone who has the AIDS virus.	1	2	3

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