

# Study on the Knowledge, Optimistic bias and Engagement with AIDS in Nursing Students

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## ABSTRACT

Our country is the only country with an increasing number of AIDS infections. To combat this reality, the knowledge and thought related to AIDS was to find out how it relates to the practice of preventing AIDS. The knowledge and optimistic bias and involvement of AIDS related to university students majoring in nursing were investigated to find out how the three variables were related. Statistical results were calculated using SPSS 18.0. Looking at the relationship between AIDS-related knowledge, optimistic bias, AIDS involvement, self-respect and self-control, the higher AIDS-related knowledge, the higher the self-esteem and self-control. The higher the optimistic bias, the higher the level of AIDS involvement, and the lower the self-respect and self-control. The higher the level of AIDS involvement, the higher the sense of self-respect, and the higher the self-esteem, the higher the sense of self-control. A high level of knowledge and involvement in AIDS is likely to be implemented as a positive health act on AIDS prevention. Therefore, we hope to reduce the growth rate of AIDS infections by providing accurate knowledge and information about AIDS, especially for teenagers and college students who are seeing an increase in AIDS infection.

**Keywords:** *AIDS-related knowledge, College student, Involvement of AIDS, Optimistic bias, Self-control, Self-respect*

## Introduction

According to study by Korea Centers for Disease Control & Prevention, (2017), while the number of new infections and AIDS-related deaths worldwide is decreasing, the number of new infections in Eastern Europe and Central Asia, including Korea, is still on the rise<sup>1</sup>. Considering that people in their 20s, which account for the largest percentage of AIDS, must manage their illnesses for the rest of their lives, one cannot overemphasize thorough prevention before obtaining them. The period of college students is when heterosexual intercourse is free, adult consciousness is open, and sexual activity is increased, overall knowledge level is not low, but relatively low level of knowledge about infection pathways and treatment by Korea Centers for Disease Control & Prevention, (2015)<sup>2</sup>.

Korea Centers for Disease Control & Prevention, (2013) suggest that AIDS knowledge refers to the facts and information that an individual has gained through training or experience in HIV/AIDS in many situations involving AIDS<sup>3</sup>. Ndugwa & Berg-Beckhoff, (2015:299-308) suggest that this is an important precondition

for disease prevention and, in most national policy programs; a great deal of effort is being made to raise the level of knowledge<sup>4</sup>. Assume that people will be aware of a disease-causing crisis and will change their behavior accordingly by Weinstein, (1984:55-59)<sup>5</sup>. However, people's inability to perceive a crisis despite their knowledge of AIDS suggests that psychological factors such as optimism bias can influence judgment.

According to Clarke, (2000: 367-376) optimistic bias refers to the tendency to believe that you are less likely to experience negative events, such as illness or physical risk, than others<sup>6</sup>. Weinstein, Marcus & Moser, (2005: 55-59) suggest that this means a low perception of a crisis, so it has been understood as a negative variable to health behaviors, such as failing to perform preventive actions or medical prescriptions, but is likely to be perceived independently of it<sup>7</sup>. Prevention is the best way to avoid HIV, when there is no full cure for AIDS yet and only a chronic disease that can be managed by symptom management by Kim, Choe & Choe, (2006: 43-58)<sup>8</sup>. In other words, safe sexual behavior is the most effective way to prevent AIDS.

Without knowing correctly about AIDS, it is known to be difficult to establish effective AIDS prevention measures as this increases the likelihood of being obsessed with excessive fear or hatred. Therefore, according to Linda, (1983: 41-61) the dissemination of correct knowledge is not only a sure way to correct one's own safe sexual behavior, but also a key to achieving effective preventive measures<sup>9</sup>.

On the other hand, involvement by Kwon & Lee, (2018: 251-262) is recognized as a variable related to an individual's motives and a concept that is distinct from knowledge<sup>10</sup>. It is defined as the degree to which individuals view things, individuals, situations, or organizations as being personally related or of personal importance. If so, it is necessary to recognize the degree of knowledge of the AIDS disease and the seriousness of the disease and to see how optimistic bias in this regard affects the effects of behavioral changes depending on the degree of involvement.

According to Hallahan, (2000: 499-515) Self-respect is a concept that shows how valuable an individual is to his or her own self-worth, ability, value, satisfaction and so on, so that he or she has positive or negative self-worth and evaluates and judges himself<sup>11</sup>. The greater self-respect, the more positive your health will be.

Health & Douglas, (1990: 193-204) suggest that Self-control refers to the extent to which individuals believe they can control what is happening to them, and the greater they think they can control what is happening to them, the greater the optimism bias and the associated variables of health-boosting behavior.

Therefore, this study was conducted to find out the correlation between AIDS-related knowledge and optimism bias and involvement among nursing college students and to establish a basis for how self-esteem and self-control affect the guidelines for preventive action.

## Method

**Research Subjects:** The study was conducted on university students attending the nursing department of B University located in Area C. First, the purpose of the study and the methods of the study were explained and the students who agreed to it were surveyed.

**Research Period:** The survey was conducted from March 4 to March 15, 2018.

**Measurement Tools:** AIDS-related knowledge was used by Son's tool, (2009: 57-78)<sup>13</sup>. AIDS knowledge tools were measured by questions about the causes, symptoms, infection paths, testing methods, prevention methods and treatment methods of AIDS. AIDS knowledge consists of 13 questions (a three-point scale) and the scoring method gives one point to the correct answer, resulting in a total of at least 0 points from a maximum of 13 points, and the higher the score, the higher the AIDS knowledge.

Optimistic biases suggest that individuals are self-centered when evaluating risks in comparison, and that they tend to believe that they are less vulnerable to risks than others when assessing their risks relative to them. That means believing that you are less likely to have a negative experience than others. Many people perceive their own chances of experiencing a crisis differently, such as illness like cancer or disaster or death like natural disasters that happen to others, which are far from them. If optimistic prejudice works with AIDS, I think I will not get AIDS even though other people may have it. An optimistic bias is likely to cause many negative consequences in society, as he believes he is not HIV-positive and therefore is more likely to neglect his health care and take risky actions. This study used tools developed by Weinstein, (1984: 431-457)<sup>5</sup>.

First of all, his own perceptual measurement of infection compared to others said, "How much do you think you're likely to be infected with AIDS compared to someone else (a normal person)?" and his own perceptual measurement of the possibility of infection compared to his or her close friend used the phrase "What do you think your chances of getting AIDS are compared to your best friend?" If respondents' response averages in each question using a seven-point scale represent the median score (4 points) of the scale, then there is no optimism bias, and if there is a higher score than the median, it can be interpreted as having an optimistic bias, and the greater the score, the greater the optimism bias.

A degree of involvement refers to the degree of perceptual relevance or importance of an individual to a subject. That is, the higher the level of involvement in a problem, the more likely it will be to find data or discuss with others, the more knowledge and attitudes will eventually change. Therefore, the increase in level of involvement in AIDS prevention education. A domestic study also found that people with a higher level

of involvement are more likely to take into account the personal seriousness and future impact of AIDS, and thus form a belief in the possibility of AIDS infection. In this study, we measured it with a tool developed by a deferred acquisition. A score measured through two questions asked about the severity of an individual's feelings about AIDS and how much impact his or her future will have by Sherif & Cantril, (1947)<sup>14</sup>.

Self-respect refers to the degree of self-respect and the degree to which an individual considers him a worthy person, as it relates to a negative or positive assessment of him. With subjective assessments of how valuable an individual is, people generally tend to think that they are better than others to maintain a positive self-image, which also affects perceptual bias. In this study, the AIDS-related self-esteem tool developed by Lee, (2011) refers to the score measured through three questions about whether she is reasonable, responsible or ethical compared to her peers<sup>15</sup>.

Self-control refers to the extent to which an individual believes he or she can control what is happening to him. If there is a sense of self-control, it affects optimism bias because it thinks it is possible to exercise control in a health crisis or crisis event. This applies to the perception of AIDS infection, which can be assumed that the greater self-respect and self-control the less likely you are to be infected with AIDS. In this study, the scores measured through two questions asked about whether the tools developed by the company could prevent AIDS and control the unhealthy sex life.

**Data Analysis:** Data collected for the purpose of the study was analyzed using SPSS 18.0 statistical program using the following analysis methods.

First, average and percentage were calculated on sociodemographic characteristics of the subjects.

Second, average and standard deviation were calculated to analyze the AIDS-related knowledge, Optimistic bias, involvement of AIDS, Self-respect and Self-control of the subject.

Third, t-test and ANOVA were conducted to explore the differences in AIDS-related knowledge, Optimistic bias, involvement of AIDS, Self-respect and Self-control according to sociodemographic characteristics of the subject.

Fourth, correlation analysis was conducted to explore the relation between AIDS-related knowledge, Optimistic bias, involvement of AIDS, Self-respect and Self-control.

## Result and Discussion

### Sociodemographic Characteristics of Subjects:

The demographic characteristics of the subjects were investigated, including sex, grade, religion, participation in religious activities, residence status, family economic power they thought they were living in, level of study they thought they were studying. Gender was 83 percent for women and 17 percent for men. The number of first graders was 31.3 percent, second graders 32.1 percent, third graders 16.4 percent and fourth graders 20.2 percent. Religion was 45.1 percent for Christianity, 4.8 percent for Buddhism, 2.7 percent for Catholicism and 47.5 percent for non-religiousness. According to a survey of religious people, 14.6 percent said they are working very hard, 48.0 percent said they are working hard, 19.7 percent said they are doing it in a perfunctory manner, and 17.7 percent said they are doing little. Asked about the type of residence, 361 percent said they live with their parents, 34.5 percent said they live in dormitories and 29.4 percent said they live alone. About 6.4 percent said they have good economic power, while 13.5 percent said they are poor. As for the level of study you think you are good at, 13.5 percent said you are good at, 44.3 percent said you are good at, 32.6 percent said you are not good at, 8 percent said you are bad at it, and 1.6 percent said you are not good at it.

### Result of AIDS-related knowledge, optimism bias, involvement in AIDS, self-respect, and self-control:

The average standard deviation values of AIDS-related knowledge, optimism bias, AIDS involvement, self-respect, self-control, AIDS-related knowledge of the subject, optimism bias, AIDS involvement, self-respecting and self-control of the subject are as follows.

AIDS-related knowledge is  $9.60 \pm 2.49$ , optimism bias is  $2.76 \pm 1.37$ , involvement in AIDS is  $5.12 \pm 1.28$ , self-respect is  $5.55 \pm 1.20$ , self-control is 1.15.

### Differences in AIDS-related knowledge according to sociodemographic characteristics:

Comparing AIDS-related knowledge according to the demographic and sociological characteristics of the subjects, it was found that differences vary with the grade. First graders were the lowest and second graders were the highest.

Second grade's AIDS-related knowledge is  $11.08 \pm 1.66$ . There were also differences depending on the level of study they were aware of, compared to students who answered that their level of study was higher than those who answered that they were doing well. The value was  $10.23 \pm 2.34$ .

Other than that, it was found that there was no difference between sex, grade, religion, participation in religious activities, residence status, family economic power they thought they were living in.

**Differences in optimism bias according to sociodemographic characteristics:** Comparing the optimism bias with respect to the demographic characteristics of the subject, it was found that there were no differences in all demographic characteristics.

**Differences in involvement in AIDS according to sociodemographic characteristics:** Comparing the level of AIDS participation according to the demographic and social characteristics of the subjects, there are differences in gender and religion. Female were higher than male, and Christian students were higher than non-religious students. Female's value was  $5.20 \pm 1.27$ . Other than that, it was found that there was no difference between grade, participation in religious activities, residence status, family economic power they thought they were living in, level of study they thought they were studying.

**Differences in self-respect according to sociodemographic characteristics:** Comparing the self-respect of the subject's demographic characteristics, the results showed that there are differences between grades. The first grade was the lowest, and the second grade students were the highest. The value was  $5.94 \pm 1.27$ . Other than that, it was found that there was no difference between sex, religion, participation in religious activities, residence status, family economic power they thought they were living in, level of study they thought they were studying.

**Differences in self-control according to sociodemographic characteristics:** Comparing the sense of self-control according to the demographic characteristics of the subject, there is difference between grades. The first grade was the lowest in grade, and the second grade was the highest. The value was  $6.25 \pm 1.00$ . Other than that, it was found that there was no difference between sex, religion, participation in

religious activities, residence status, family economic power they thought they were living in, level of study they thought they were studying.

**Relation between AIDS-related knowledge, optimism bias, involvement in AIDS, self-respect and self-control:**

The results of looking at the relationship between AIDS-related knowledge, optimism bias, involvement in AIDS, self-respect and self-control are as follows. The higher the knowledge of AIDS, the higher the self-esteem and self-control. Optimistic bias has a positive correlation with involvement in AIDS. And optimism bias has a negative correlation with self-respect and self-control. The level of involvement in AIDS had a positive correlation with self-esteem. And the level of involvement in AIDS has been shown to be correlated with the amount of self-esteem and self-control.

## Conclusion

A high level of knowledge about AIDS and a high level of involvement in AIDS shows a high degree of self-esteem and self-control, which is expected to ultimately be implemented as a positive health act on AIDS prevention. And you may neglect to manage your health under the influence of optimism bias, as seen by the result that optimism bias has a negative correlation between self-respect and self-control. Thus, a strategic approach to reducing optimism bias is needed. Increasing the level of knowledge and involvement of university students in AIDS will allow university students to engage in desirable health practices. It is also expected that by analysing detailed factors such as self-esteem and self-control among university students, providing preventive education for each trait will affect the decreasing number of AIDS patients in their 20s.

In an era where information is rapidly changing and communicated through the development of the Internet and the use of smartphones, college students are indiscriminately exposed to sex. For college students who are emotionally sensitive against the reality placed in an open environment and whose values for sex are not immediately formed, the issue of sex can no longer be a serious one. In particular, college students are highly vulnerable to the spread of AIDS at a time when they are free to engage in sexual activities. Therefore, methods of AIDS prevention education will have to be presented in various ways in response to the rapidly changing perception of sex.

Looking at the results of this study, we found that the degree of optimism about AIDS was found to have an optimistic bias. In other words, they are perceived to be less likely to be infected with AIDS than others who have the same conditions as themselves. As a result, they will not think they are subject to AIDS prevention education, which is likely to have a negative impact as well as lower the effectiveness of AIDS prevention education.

The degree of engagement showed a significant correlation with optimistic bias, confirming that the higher the involvement, the more optimistic bias increases. By increasing the relevance or importance of AIDS to me in terms of AIDS prevention education, attitudes toward AIDS will change and reduce the optimism bias.

Self-respect showed a significant negative correlation with optimistic bias, confirming that the higher the self-respect, the lower the optimism bias. Raising self-respect needs to be considered when planning AIDS prevention education because it increases sense of accomplishment and confidence, is responsible for one's actions, makes good use of information and resources around one's surroundings, and reduces optimism bias.

Self-control, like self-respect, shows a significant static correlation, and the higher the self-control, the lower the optimism bias. High self-control is necessary to consider when planning AIDS prevention education because it results in lowering the optimistic bias while acting as a deterrent to problem behaviour.

In conclusion, it can be seen that optimism bias has a significant correlation with many important variables. Therefore, not only should it emphasize the transfer of knowledge and practice in AIDS prevention education, but it should also seek educational measures to reduce the optimistic bias that you will not be infected with AIDS.

This study identified the degree of optimism bias and the main variables that are correlated with it, and based on this study; specific program development and effectiveness for preventive education are needed.

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**Conflict of Interest:** The authors declare no conflict of interest.

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