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Second-Year Iowa Associate Degree Nursing Students'

Attitudes toward Persons with AIDS

Mary Lou Lauer¹

Abstract: The attitudes of second-year associate degree nursing students toward persons with AIDS who became infected with HIV by one of three different modes of transmission, and toward patients not having AIDS but instead having leukemia, was investigated. Participants read one of four vignettes about a man having either leukemia or AIDS contracted by either unsafe male-male sexual activity, unsafe drug use, or through a blood transfusion. Participants then responded to two attitude inventories and answered fourteen questions about descriptive variables. Results from factor analysis and univariate analysis of variance indicated that students' attitudes were most positive toward the individual with leukemia, nearly as positive toward the individual with AIDS who contracted HIV through a blood transfusion, less positive if he had acquired HIV by unsafe drug activity, and least positive if he had acquired HIV by unsafe male-male sexual activity.

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Acquired immunodeficiency syndrome (AIDS) is one of the most complex health problems of this century, and it is currently reaching near epidemic proportions. The lives of millions of people are in jeopardy from this disease, a **totally** unknown illness in the United States only thirteen years ago. Persons with AIDS are faced with poor health and early, painful, often lonely deaths. They, their families and **significant** others are frequently faced with ostracism, economic ruin, and the **deterioration** of family life. AIDS can be a devastating disease in every respect.

In 1981, the first American cases of the syndrome now known as AIDS were **identified** (CDC, 1981). Since then the AIDS epidemic has **killed** 100,777 people in the U. S., and the Centers for Disease Control (CDC) estimates that another 165,000-215,000 AIDS patients may die in the next three years alone ("Possible AIDS deaths," 1991). CDC projections estimate that by 1993 there will be 61,000-98,000 new cases of AIDS and 151,000-225,000 persons living with the disease. CDC'S current estimate of the number of people infected with human immunodeficiency virus (HIV), the virus considered to be the cause of AIDS, is approximately 1,000,000, with at least 40,000 new cases of infection occurring each year (CDC, 1990).

With no effective treatment or vaccine available now or expected in the near future (Hanson, 1991; Tindall & Cooper, 1991), medicine at this time seems to have little to offer the patient in terms of prevention or cure to persons with AIDS (Young, Koch, & Preston, 1989). Instead, it is thought that nursing can make the most difference by providing emotional support and physical care for AIDS patients and their families (**Selby**, 1986). In fact, nurses, more than any other health care professionals, are on the forefront of AIDS

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patient care. Within their various specialties and work settings, nurses are responsible for providing the entire gamut of health care services and interventions as they deal with the spectrum of disorders caused by HIV (Flaskerud, 1987).

Nurses have more direct contact with AIDS patients than any other health care group. But a number of studies indicate that many of the nurses surveyed are **fearful** of contracting AIDS and do not have confidence in their ability to meet the intense physical and psychological needs of patients with this illness (Scherer, Haughey, & Wu, 1989). Kelly, St. Lawrence, Hood, Smith, and Cook (1988) found that nurses reacted with much more attitudinal negativity toward a patient labeled as having AIDS than toward an identically described patient diagnosed with leukemia. If today's practicing nurses are experiencing and reporting attitudinal difficulties when caring for AIDS patients, it would seem important to consider the feelings and attitudes of nursing students while they are still in **training** in order to confront and prevent ahead of time the conflicts arising from their feelings towards persons with AIDS.

Need For The Study

It is obvious that current and future AIDS patients represent a challenge to **healthcare** workers, especially to nurses. This challenge must also extend to schools of nursing in order that they may plan curricula that can combat the fears and concerns of future nurses before they must care directly for patients.

While baccalaureate-prepared nurses tend to move into **administrative** positions in many hospitals, associate degree (AD) nurses continue to provide a majority of the front line **direct** patient care. Today's AD nursing students will undoubtedly be **called** upon to care for

tomorrow's AIDS patients. There is an increasing likelihood that students in AD nursing programs today will encounter a patient with AIDS at some point in their nursing careers. Newly graduated AD nurses may be more concerned because they realize that in their day-to-day work there is a good chance they will encounter a person with AIDS. In addition, anticipating the care of AIDS patients may raise conflicting moral and ethical issues, fears, and negative attitudes with which students have not yet come to terms, attitudes that could result in **suboptimal** patient care (Lester & Beard, 1988). While some **studies** have characterized the attitudes of baccalaureate and master's degree nursing students, no studies have been found as of this date that address the attitudes of AD nursing students toward persons with AIDS.

Purpose of the Study

The purpose of this study was to examine and identify second year Iowa associate degree nursing students' attitudes toward persons with AIDS. The following three research questions emerged from this purpose:

1. Does the manner in which a person became infected with HIV (including unsafe male-male sexual activity, unsafe drug use, or blood transfusion) affect nursing students' attitudes about that person?
2. Are nursing students' attitudes toward persons who acquired AIDS by each of these three methods of transmission more negative than they would be about a person with another serious disease, such as leukemia?
3. Are nursing students' attitudes about persons with AIDS related to differences in student descriptive measures such as age, gender, or religious identification?

Methodology

Population

The population consisted of all AD nursing students who were in their second year of the nursing program at Kirkwood Community College in Cedar Rapids, Iowa (N = 144).

Instrumentation

The instrument used in this study was adapted from Kelly et al. (1988) and consisted of one of four possible short vignettes describing a person. The vignette was followed by two inventories on which research participants recorded their impressions of the person described in the vignette. The final section contained questions about student demographics and other descriptive measures. The instrument was reviewed by subject experts and pretested.

The four vignettes were completely identical except for the person's disease diagnosis: either leukemia or AIDS, and if the person had AIDS, those three vignettes differed according to the manner in which the person became infected with HIV: either by unsafe male-male sexual practices, by intravenous drug use and unsafe needle sharing practices, or by an infected blood transfusion. The vignettes all depicted a male named Mark who was 32 years of age and employed as a division manager in a computer manufacturing firm. Mark was an outgoing, athletic individual whose health and overall well-being had declined dramatically with the progression of his disease.

Immediately after reading the assigned vignette the participants responded to two attitude scales designed to measure their feelings toward Mark. The **first** attitude scale, the Prejudicial Evaluation Scale (PES), consisted of 8 items rated on a 7-point Likert-type scale with bipolar ratings (1 = strongly disagree to 7 = strongly agree). Participants were asked

to rate the degree to which they thought the statements in the PES described Mark. The following statements were included in the PES:

1. Mark deserves sympathy and understanding.
2. Mark deserves what has happened to him.
3. Mark is dangerous to other people.
4. Mark deserves the best medical care possible.
5. Mark deserves to die.
6. The world would be better off without Mark.
7. Mark deserves to lose his job.
8. Mark should be quarantined so he does not expose others,

The reliability coefficient (alpha) for the PES in this study was 0.86.

The second attitude scale, the Social Interaction Scale (SIS), consisted of seven items rated on a 7-point Likert-type scale with bipolar ratings (1 = not at all to 7 = very much so). In the SIS participants were asked to rate their willingness to interact with Mark. The following questions were included in the SIS :

1. Would you attend a party where Mark was present?
2. If you met Mark, would you be willing to strike up a conversation with him?
3. Would you attend a party where Mark was preparing dinner?
4. Would you be willing to work in the same office with Mark?
5. If you were a friend of Mark's, would you be willing to continue the friendship at this time?
6. Mark's lease is up in two months. If you were his landlord, would you renew it?

7. Would you allow your children to visit Mark in his home?

The reliability coefficient (alpha) for the SIS in this study was 0.95.

Following the attitude scales, the students responded to fourteen questions about demographic as well as other descriptive measures. These measures included age, gender, sexual orientation, marital status, race, religious **identification**, political persuasion, level of education before entering this nursing program, chief source of AIDS information, whether or not the student has children or is employed, whether or not the student knows someone who is gay or knows someone who is **HIV-positive** or who has AIDS, and whether or not the student has provided nursing care to someone with AIDS.

Data Collection

A nonprobability convenience sample was obtained from 122 (84.7 %) of the 144 students enrolled in the second-year Kirkwood nursing program. Participation was on a voluntary basis, and all subject responses were kept anonymous. A cover letter outlining an agreement to participate was distributed at the time of data collection. The questionnaires were administered to the students during their regularly scheduled nursing classes on the test day. The four different vignettes were assigned randomly to each participant in such a way so that there was a fairly equal representation of each vignette among the participants for comparison purposes.

Data Analyses

All student responses from the instrument were first subjected to a principal components factor analysis procedure. This analysis extracted principal components for each attitude scale having an eigenvalue of greater than 1.00 in the unrotated factor pattern matrix. The

factors extracted for the attitude scales were interpreted by noting all those loading above 0.50, then grouped and named accordingly.

Factor analysis for the PES yielded two principal factors. Factor 1 was labeled the “negative consequence factor,” and Factor 2 was labeled the “negative evaluation factor.” Factor analysis for the SIS yielded one principal factor that was labeled the “social interaction factor.”

A score was computed for each research participant on each of the three factors extracted from the two attitude scales by calculating the sum of the participants’ responses to each item that loaded on the respective factors from the two scales. Attitude scores were then subjected to univariate analysis of variance (ANOVA), using the scores as the dependent variables and disease diagnosis and method of HIV transmission as the independent variables. Statistically significant differences were further analyzed using Tukey’s Studentized Range Test in order to maintain the Type I error rate at alpha and make all possible pair-wise comparisons of the differences in group means (Hinkle, Wiersma, & Jurs, 1979).

Demographic and descriptive measures from the final section of the instrument were analyzed with regard to means, frequencies, and percentages. ANOVA was used to look for differences in the attitude scores (dependent variables) and the demographic/descriptive measures (independent variables), and statistically significant differences were further analyzed using Tukey’s Studentized Range Test.

Results and Discussion

Population

The research population consisted predominantly of white, heterosexual, married women who ranged mainly from 21-39 years of age (79.2%). Most participants were either Catholic or Protestant and considered themselves to be politically middle-of-the-road. A majority reported having children, and most were employed at least part-time. Most of the respondents had received just a high school education or high school plus Licensed Practical Nurse (LPN) training before entering this two-year associate degree nursing program. More than 60% had friends or acquaintances who were gay men, but only a third of the respondents knew someone with AIDS or who was HIV⁺. Almost 40% of the respondents reported that as a nursing student they had provided care to someone with AIDS. Almost 30% of the respondents reported that their chief source of information about AIDS had been the popular media such as TV programs or magazines, while 35.3% said that a college course had been their chief source of AIDS information.

To determine whether the four groups of students reading the different vignettes were comparable to each other with respect to these descriptive variables, a series of Chi square tests of association was conducted. Results showed no significant differences among the four groups on any of the demographic or descriptive variables.

Research Questions 1 and 2

Research questions 1 and 2 asked, "Does the manner in which a person became infected with HIV affect nursing students' attitudes about that person?" and "Are nursing students'

attitudes toward persons with AIDS were more negative than they would be about a person with another serious disease, such as leukemia?"

According to the statistical comparisons (Table 1), PES factor 1 (negative consequence) results indicated that nursing students thought an individual with AIDS acquired through unsafe male-male sex practices deserved more negative consequences than did a person with either leukemia or with AIDS acquired through a blood transfusion. PES factor 2 (negative evaluation) results indicated that nursing students evaluated an individual with AIDS due to either unsafe male-male sex practices or unsafe drug practices more harshly than they did an individual with either leukemia or with AIDS acquired from a blood transfusion. Using the SIS social interaction factor, results indicated that nursing students preferred to interact more on a social basis with persons having leukemia than they did with persons having AIDS caused by either unsafe male-male sex practices or unsafe drug practices.

Using mean attitude scores, results indicated that the manner in which a person became infected with HIV did affect nursing students' attitudes about that person. Nursing students also had more positive attitudes toward a person with leukemia than toward a person with AIDS regardless of how he contracted HIV.

Research Question 3

Research question 3 asked, "Are students' attitudes about persons with AIDS related to differences in student descriptive measures such as age, gender, or religious identification?" Results showed that only three of the fourteen descriptive measures appeared to be related to differences in nursing students' attitudes about persons with AIDS: the level of education attained before entering this AD nursing program, the participants' chief source of

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Table 1

Analysis of Variance Test Criteria Used to Test for Differences in Mean Attitude Scores Among the Four Vignettes Read

	Vignette Read	N	Mean Attitude Score	F Value	Significance	P	Tukey Results
PES Factor 1 (Negative consequence)	AA	31	10.45	7.05	0.0002	<0.05	A deserves more negative consequences than Cor D
	B	30	8.30				
	c	31	6.13				
	D	30	5.70+				
PES Factor 2 (Negative evaluation)	A	31	10.81	22.98	0.0001	<0.05	D & C deserve fewer negative thoughts or labels than A or B
	B	30	8.53				
	c	31	5.26				
	D	30	4.10+				
SIS (Social interaction)	A	31	35.07	8.06	0.0001	<0.05	Prefer to interact socially more with D than with A or B
	B	30	37.60				
	c	31	41.19				
	D	30	46.20*				

Vignette A: HIV acquired by unsafe male-male sex
 Vignette B: HIV acquired by unsafe drug use
 Vignette C: HIV acquired by transfusion
 Vignette D: leukemia

+ lower score corresponds with better attitude
 * higher score corresponds with better attitude

Nursing students who had been through LPN training or had at least some college courses, and had used college courses as their chief source of information about AIDS had more positive attitudes toward persons with AIDS as measured by the social **interaction** factor (Table 2). In addition, those nursing students who reported that they had a friend or acquaintance who was a gay man expressed more positive attitudes toward individuals with AIDS as measured by all three factors on the attitude scales (Table 3).

Table 2

Analysis of Variance Test Criteria Used to Test for Differences in Mean Attitude Scores According to Descriptive Variables. Using S1S Factor

	N	Mean Attitude Score	F Value	Significance	P	Tukey Results
Using S1S Factor						
Level of Education						
A. HS	38	35.63	5.63	0.0046	<0.05	A's and B's more willing to interact with PWA's ^A than C's were
B. LPN	38	41.24				
C. Some college	46	42.54 [*]				
AIDS Info Source						
A. College	43	42.44 [*]	3.09	0.0298	<0.05	
B. CE	21	42.14				
C. Journals	16	40.10				
D. Media	42	36.36				

* higher score corresponds with better attitude

^A Persons with AIDS

Table 3

Analysis of Variance Test Criteria Used to Test for Differences in Mean AttitudeScores According to Descriptive Variables. Using All Three Factors

		N	Mean Attitude Score	F Value	Significance	P	Results
Using PES Factor 1	Know Gay Men? YES	77	6.90+	5.19	0.0245	<0.05	Better attitude toward PWA's [^] if student knew gay men
	NO	45	8.96				
Using PES Factor 2	Know Gay Men? YES	77	5.96+	18.67	0.0001	<0.05	Better attitude toward PWA'S if student knew gay men
	NO	45	9.29				
Using S1S Factor	Know Gay Men? YES	77	42.99*	21.28	0.0001	<0.05	Better attitude toward PWA'S if student knew gay men
	NO	45	34.84				

+ lower score corresponds with better attitude

* higher score corresponds with better attitude

[^] Persons with AIDS

Discussion

According to the results of this study, nursing students' attitudes toward persons with AIDS varied significantly according to the manner in which the **individual** became infected with HIV. Attitudes were the most negative towards the individual who became infected with HIV through unsafe male-male sexual activity and somewhat less negative towards the

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individual who became infected with HIV by unsafe drug use. Of the three individuals with AIDS, the least negative attitudes were toward the individual who acquired HIV through a blood transfusion. In addition, nursing students' attitudes were more negative toward individuals with AIDS regardless of how they became infected with HIV as compared to their attitudes toward individuals with the disease leukemia.

These general findings are neither surprising nor unexpected in relation to the research that has been done in this area. Strasser and Damrosch (1989) used a similar vignette approach with baccalaureate nursing students to determine that a hemophiliac patient with AIDS and a patient with leukemia were both considered to be less responsible for and less deserving of their disease than was a gay man with AIDS. Both of the AIDS patients were considered more dangerous than the leukemia patient, and both were also more socially stigmatized. Kagan (1986) also used vignettes to measure baccalaureate nursing students' attitudes towards patients with AIDS. Her research showed that nursing students evaluated an intravenous drug user with AIDS more negatively than they did individuals with AIDS contracted through unsafe male-male sexual activity or through a blood transfusion, and more negatively than an individual with pneumonia who did not have AIDS. The IV drug user was also rated as more fear-producing, while the gay man with AIDS was considered to be less masculine than either the transfusion recipient with AIDS or the individual with pneumonia without AIDS. Nursing students as well as other health care professionals report fear of caring for persons with AIDS, homophobia attitudes, and an intolerance of drug use and drug users.

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Additionally, the level of education that the nursing students in this study attained before entering this AD nursing program affected their attitudes toward persons with AIDS as measured by the social interaction factor of the SIS attitude scale. Nursing students who had either attended LPN training prior to entering this program or had at least some college experience were more willing to interact socially with persons having AIDS than did the nursing students whose highest level of education before entering **this** program had been only high school or its equivalent. Thirty-one percent of the participants in this study had achieved only a high school level education before entering this nursing **program**, 31 % had received LPN training, and 38% had at least some college work. It seems reasonable that persons who have already had some nursing training or even some college courses would have better attitudes towards individuals with AIDS -- these students would have had more opportunities to learn about the transmission of HIV and about the disease AIDS itself.

In a somewhat related finding, again measured by the social interaction factor, nursing students who considered college courses to be their chief source of information about AIDS (35 % of the participants) were more willing to interact with persons having AIDS than did the nursing students who considered their chief source of information about AIDS to be the popular media such as television or magazines (30% of the participants). While the popular media certainly has its place in the information world, health educators are quick to emphasize the need for appropriate educational interventions for anyone entering the health field. The more up-to-date and correct information that nurses have about AIDS, the better able and willing they will be to administer care to their patients with AIDS.

Nursing students' attitudes about persons with AIDS were consistently more positive as measured by all three factors from the attitude scales if the nursing students reported that they had friends or acquaintances who **were** gay men. Seventy-seven of the 122 nursing students who participated in this study (63.1 %) said that they had a friend or an acquaintance who was a gay man. Although a majority of the participants reported knowing gay men, and their attitudes were better towards individuals with AIDS if they **did** know a gay man, nursing students' attitudes in general were the most negative towards the individual depicted in Vignette A who was a gay man and had acquired **HIV** through unsafe male-male sexual activity, This inconsistency could be explained by the fear of contagion -- nursing students may know and like gay men, but those gay men who are infected with HIV could pose a perceived threat to those nursing students who have to administer care to them. Or, perhaps, a certain amount of homophobia is present -- while nursing students may know and like gay men, they may also have negative attitudes toward male-male sexual activity or toward unsafe or irresponsible sexual activity in general that would cause them to harbor negative attitudes towards gay men with AIDS.

Conclusions and Recommendations

The first conclusion from this study is that the attitudes of **second-year** associate degree nursing students do differ toward individuals with AIDS according to the manner in which the individual became infected with HIV. These students' attitudes mirror the attitudes reported across the country by other nursing students and also by other health care professionals: persons with AIDS who acquired their HIV infection **in** a manner that could be viewed as being out of their direct control, such as through a blood transfusion, were

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viewed as being less deserving of their illness and also were considered to be more socially acceptable. But persons with AIDS who acquired their HIV infection through behavior that is considered not only as being under their direct control but also as **being** socially undesirable by much of society, such as engaging in unsafe intravenous **drug** activity and unsafe male-male sexual activity, were viewed as being more deserving of their illness and much less acceptable for social interaction.

The second conclusion from this study is that second-year associate degree nursing students do have more negative attitudes about persons who acquired AIDS by either unsafe male-male sexual activity, unsafe drug use, or through a blood transfusion than they do about persons with another serious disease, such as leukemia. This finding is also consistent with the current literature in this area of research. Leukemia is considered to be a deadly disease much like AIDS. but the social stigma and behavioral responsibility that is associated with AIDS is absolutely not associated with leukemia. The fact that AIDS is also an infectious as well as a communicable disease is another fact that must be **considered**. The students in **this** study were more willing to interact socially with an individual with leukemia than they were with an individual with AIDS even though his infection was acquired through a blood transfusion -- the fear of contagion with HIV even when interacting on a purely social basis is still a prevalent notion in our society, a society which includes nursing students.

The third conclusion from this study is that **second-year** associate **degree** nursing students' attitudes toward persons with AIDS are related to three differences in student descriptive variables: participants' level of education before entering this AD nursing program, their chief source of information about AIDS, and whether or not the participants

have friends or acquaintances who are gay men. These findings have practical implications for nursing education.

While this study did not focus on the participants' knowledge level about AIDS, it is evident from the results that even on a social basis, nursing students **preferred** to interact less with persons who had AIDS than with persons who had leukemia, even though there is no scientific evidence to support the transmission of HIV through ordinary social contact. If nursing students have trouble interacting on a social basis with persons having AIDS, it would seem highly likely that they would **also** have problems administering nursing care to individuals with AIDS. One of the explanations for this might be that nursing students, as well as many practicing nurses, feel like they lack the necessary information to care for HIV⁺ patients safely and properly.

Nursing educators must continue to incorporate current information about AIDS into their nursing curricula. at all levels of their nursing programs, and concerning as many aspects of the disease as possible, from modes of transmission, to current **infection** control guidelines. to treatment modalities. In a survey of 547 **NLN-accredited** nursing schools in the U. S., Chitt y (1989) found that 72% of schools that included AIDS content in their curriculum devoted five or fewer classroom hours to the topic. Only 1.6% reported spending 16 to 20 classroom hours on the topic, which is less than half of a three **semester-**hour course.

In this study, participants who considered college courses such as microbiology or nursing courses to be their chief source of information about AIDS had more positive attitudes about persons with AIDS. Even in a two-year AD nursing program, many of the

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courses that students take can provide information about AIDS, including physiology, microbiology, and nutrition courses. Nursing courses can then follow with more specific information about patient care, occupational exposure to HIV, **transmission** in the workplace, and precautions for *healthcare* workers.

Even though cognitive knowledge about AIDS is critical in nursing curricula, the affective or attitudinal component of AIDS education is perhaps even more important. Affective AIDS education for nursing students requires more than just **additional** information about HIV and group discussions with role playing. The most effective educational strategies for influencing attitudes appear to have a strong affective component in which feelings can be expressed openly and in a nonthreatening atmosphere (Flaskerud, 1991). In AIDS education, this would include permission to openly express and then discuss any negative feelings held by nursing students about gay men and intravenous drug users or various sexual practices or activities. It would also include identifying those aspects about AIDS that frighten or anger nursing students: homosexuality, drug use, or having to care for persons with AIDS.

Results from this study indicated that nursing students who had friends or acquaintances who were gay men had better attitudes about persons with AIDS. Nursing curriculum developers and program planners can take student characteristics such as this into account when planning nursing curricula and educational **programs**. Educators can provide supplemental information when possible and can design **specific** interventions for nursing students based on their social and cultural differences. Data from this study **would** suggest that involving gay men in educational programs would give participants a chance to meet and engage in a dialogue with types of persons they may not have known previously. A positive

educational or group experience with drug users, gay men, and AIDS patients would help students understand and appreciate all types of people and could also help decrease any fear or mistrust that may exist.

Programs with different emphases could be developed for nursing students who have different social or cultural backgrounds. Students who have already had LPN training or other college courses could engage in discussions or study sessions with students who have had only a high school education. Educational interventions that bring nursing students together to discuss their differing views can promote acceptance and understanding of their patients and of each other.

Note: Copies of the vignettes and inventories used in this study are available from the author upon request.

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