
Influence of Education on Self-perceived Attitudes about HIV/AIDS among Human Services Providers

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Participants in a number of different HIV/AIDS educational programs, varying in content, length of course, and student audience, were surveyed to determine if education could help reduce fear and increase comfort in work with HIV/AIDS clients. It was hypothesized that attitude scores would improve following exposure to the educational programs. A retrospective pretest-posttest survey design consisting of Likert statements was used. A t test for paired samples determined if attitude scores improved following exposure to the educational programs. An analysis of variance determined if significant differences in pretest and posttest scores existed among the groups. Within groups, there was a positive increase in self-assessed attitude scores. Multiple group comparisons indicated significant differences between groups that appear to be related to program content and length. Workplace risk and whether a program was elective may have also been factors affecting attitude.

Key Words: AIDS; attitudes; education; HIV; providers

Human immunodeficiency virus (HIV) infection presents serious health and social concerns. Former Surgeon General C. Everett Koop stated that "the purely scientific issues pale in comparison to the highly sensitive issues of law, ethics, economics, morality and social cohesion that are beginning to surface" (cited in Ember, 1987, p. 50).

The current study was undertaken in recognition of the need for relevant education of social services and health care professionals who care for people with HIV infection and acquired immune deficiency syndrome (AIDS). Although such professionals play a critical role in affecting how persons with HIV/AIDS and their significant others are treated, "perceptions founded on fears and incomplete information . . . may impair a [professional's] ability to care

for clients" (National Institute of Mental Health, 1986, p. 3). The purpose of this study was to see if educational programs about HIV/AIDS directed at those preparing to become human services providers and at those already practicing would reduce fears about working with HIV/AIDS clients.

Literature Review

The literature suggests that the ability of human services providers to work effectively with clients who are HIV positive may be linked to several complex factors. Perhaps the most salient factor is possession of the appropriate knowledge, attitudes, and skills to adequately address the needs of people with AIDS (Health Resources and Services Administration, Public Health Service, 1987). Studies indicate that

social work students may be moderately or highly fearful of AIDS, may be misinformed about means of transmission, and have gaps in factual knowledge about AIDS (Dhooper, Royce, & Tran, 1987-1988; Wexler, 1989).

Human services providers who work with HIV/AIDS clients need to become more knowledgeable about the disease and to understand the minimal occupational risk of HIV exposure (Rosse, 1988). Knowledge about factors such as prevention, clinical presentation, transmission, and client lifestyle related to HIV also is important. In addition, the influence this knowledge has on the attitude of the service provider is critical to effective intervention. Workers need to "explore their own thoughts and responses to gay lifestyles and to drug-using clients" and "any personal doubts or anxieties about working with such clients" (Wiener, 1986, p. 41). Although more information and facts about HIV syndrome are needed, studies reveal that it is imperative that education address negative attitudes and beliefs as well as feelings about working with persons with AIDS (Merdinger, Wren, & Parry, 1990; Van Servellen, Lewis, & Leake, 1988).

Method

Sample

Participants ($n = 213$) in a number of educational programs on HIV/AIDS were surveyed to determine if education could help reduce fear and increase comfort in working with HIV/AIDS clients. Program designs varied in content, length of course, and participant audience. Initially seven groups were surveyed. Preliminary analysis suggested that several programs, which were similar in content, length, and participants, could be collapsed for purposes of analysis and discussion. A description of the program designs is provided in Table 1.

Two groups taught by the same instructor (who had a master's degree in social work and considerable experience in the area of HIV/AIDS) that had the same course content and that were composed almost entirely of graduate social work students were collapsed into the Smith College/Catholic University group. Two other groups, which were collapsed into the Nursing Updates group, were composed entirely of registered nurses returning for their bachelor of science degrees who had received the same program content by the same instructor, an epidemiologist.

Two of the courses, UMBC 1 and UMBC 2, were planned and presented by the researchers at

the University of Maryland Baltimore County. These courses were made up of students in undergraduate programs in social work and health administration and others with an interest in the topic of HIV/AIDS.

The UMBC courses and the Maryland Women's Health Coalition workshop provided lectures by a range of professionals knowledgeable in the field, including social workers, health educators, nurses, ministers, and physicians. Coalition workshop participants were human services professionals, many of whom were actively working with HIV/AIDS clients.

The researchers either attended or reviewed content descriptions for all of the programs surveyed. Except for UMBC 1 and 2, program contents were devised and presented by their various sponsors and instructors without any control or input from the researchers. The participants in the groups were self-selected based on their interest in the topic, with the exception of the Nursing Updates groups, which were a required part of the participants' education. In all of the groups, the majority of the participants were female and white (90 percent female and 92 percent white).

Survey

After completion of the courses, participants were surveyed to assess self-perceived changes in attitudes about AIDS. The survey was a retrospective pretest-posttest designed for this study. The instrument was reviewed by all participating program planners and, where necessary, by appropriate university administrators before it was administered to course participants.

As part of a larger instrument of 28 items, a series of six Likert statements related to the respondents' fear about HIV/AIDS and concern about working with infected clients. First, the participants were asked to rate their agreement with the statements on a five-point scale, considering how they felt before they took the course. Then, using the same set of statements, they were asked to rate how they felt having completed the course.

Attitude statements addressed self-assessed feelings of fear about casual and workplace contact and avoidance of and comfort in working with HIV/AIDS clients (for example, "In providing services, I would try to avoid working with HIV/AIDS clients"). Operationally, an increase in score from pretest to posttest was defined as improved attitude. It was hypothesized that attitude scores would improve following exposure to the educational programs.

Table 1

Program Descriptions

Group	Number of Participants/ Number of Respondents	Response Rate (%)	Program Length	Program Type	Program Content
Smith College/ Catholic University	37/30	82	Six- or 15-week period	Three-credit course taught in the school of social work	Factual information on epidemiology and transmission of disease, values clarification, psychosocial issues, community resources, and public policy
UMBC 1	30/22	73	Three-week period	One-credit course cosponsored by the social work department and program in health administration	Factual information on epidemiology and transmission of disease, values clarification, psychosocial issues, community resources, and public policy
UMBC 2	50/43	86	Three consecutive evenings	One-credit course cosponsored by the social work department and program in health administration	Factual information on epidemiology and transmission of disease, values clarification, psychosocial issues, community resources, and public policy
Maryland Women's Health Coalition	47/35	74	One full day	A combination of speakers and workshops for working professionals	Participants selected from a range of workshops on HIV/AIDS issues related to the professional needs of caregivers, with a focus on women
Nursing Updates	135/83	61	Two-hour session	Sponsored by the school of nursing directed toward registered nurses returning for their bachelor of science degrees	Factual information on epidemiology and transmission, risk infection among health professionals, and treatment of patients

When dealing with self-reported measures, a retrospective pretest–posttest design can be a more effective alternative to the traditional pretest–posttest in measuring treatment effects. Howard et al. (1979) reviewed five studies assessing the value of using the retrospective pretest design. They found that individuals changed their perception of their initial level of functioning during the course of the treatment. This response shift confounded the report of improved functioning using the traditional pretest–posttest design. Using a retrospective pretest reduced the effects of treatment-produced response shifts. Individuals surveyed at a one-year follow-up on pretest ratings were closer to their retrospective pretest scores than their traditional pretest scores. The retrospective pretest–posttest self-report analysis was found to be in greater agreement with the analysis of an objective measure of change. Other studies also reported on by Howard et al. (1979) showing little or no change between retrospective pretest and posttest scores suggested that when change occurs it reflects more than subject compliance in providing favorable evaluations.

Data Analysis

Using the Likert sums, pretest and posttest attitude scores were created. A *t* test for paired samples was used to determine if attitude scores improved following exposure to the educational programs.

Because courses varied in format and content, an analysis of variance using a multiple group comparison test developed by Tukey was done (Pagano, 1986). To perform this analysis, a variable was created by subtracting the pretest scores from the posttest scores to determine if significant differences in pretest and posttest attitude scores existed among the groups. In addition, cross-tabulations were run comparing the groups on how they responded to the

posttest question, “I feel this course has helped me to work with HIV/AIDS patients in a more accepting, responsive manner.”

Findings

Within groups, there was a positive increase in scores for self-assessed attitudes. The *t* tests were significant for all groups at the .001 level (Table 2). The multiple group comparison of the difference between pretest and posttest attitude scores using analysis of variance indicated that there were significant differences between groups.

The groups that had the highest gain in attitude scores were the Smith College/Catholic University group and the UMBC 1 program. The participants in the Nursing Updates and the Maryland Women’s Health Coalition program had the lowest mean differences between pretest and posttest scores and were significantly different from the Smith College/Catholic University group and the UMBC 1 and 2 programs (that is, they showed the least gain in attitude scores). Two other groups were significantly different from each other: The UMBC 2 group had a smaller increase between pretest and posttest attitude scores than the UMBC 1 group. The test of significance for all groups was at the .05 level.

To further examine variation among the groups, the groups were compared on responses to the following statement: “I feel this course has helped me to work with HIV/AIDS patients in a more accepting, responsive manner.” The ranking of the groups by strong agreement that their course was helpful in working with HIV/AIDS clients directly corresponded with the ranking of the groups by gain in attitude scores. Starting with the highest mean difference in pretest and posttest scores, the groups were ranked in the following order: UMBC 1, 86 percent strongly agreed; Smith

Table 2

Pretest and Posttest Mean Scores by Group

Group	Pretest Mean	Posttest Mean	<i>t</i> Values	Degrees of Freedom
UMBC 1	13.95	20.82	7.35*	21
Smith College/ Catholic University	17.00	21.79	6.71*	28
Maryland Women’s Health Coalition	19.10	20.87	3.53*	29
Nursing Updates	14.94	16.30	4.62*	77
UMBC 2	15.27	19.17	5.90*	40

**p* ≤ .001.

College/Catholic University, 73 percent strongly agreed; UMBC 2, 53 percent strongly agreed; Maryland Women's Health Coalition, 25 percent strongly agreed; Nursing Updates, 13 percent strongly agreed.

Discussion and Conclusion

All of the educational programs appear to have had a significantly positive effect on attitudes about AIDS and HIV clients. There were, however, some interesting differences among the groups. Program content may have played a role in affecting attitude change. For example, the Nursing Updates, which did not contain information on psychosocial needs or offer an opportunity for values clarification, appeared to have had a less-positive effect on attitude change. However, another difference was that participation in the two Nursing Updates was mandatory. All of the other programs were chosen by the participants because of interest in the topic. Therefore, the participants in those elected programs may have been more receptive to information that would positively influence their attitude.

Workplace risk also may have influenced the effect of education on attitude. Nurses in the Nursing Updates, who actually have a higher workplace risk than most other study participants, may have been less amenable to attitude change. A comment scribbled in the margin of one nurse's questionnaire may reflect the feelings of others: "Even though I was well educated, I have an irrational fear and nothing will change it."

The length of the program appeared to be an even more critical factor in affecting perceived attitude change. There are several findings that lead to that conclusion. The Nursing Updates each consisted of one two-hour session—shorter than any of the other formats. The point that length of program was important was underscored when the two UMBC programs were compared. The UMBC 1 group had a significantly greater gain in attitude scores than did the UMBC 2 group. The content, organization, format, number of hours (12.5) in the classroom, and general characteristics of the participants were the same for both programs. However, the UMBC 1 program was presented over a three-week period; the UMBC 2 program was presented in three consecu-

tive nights. These findings suggest that shorter course formats do not allow sufficient time to process information. In continuing education, where time is limited, it might be better to schedule two one-hour sessions a week apart instead of one two-hour session. This would give the participants the opportunity to rediscuss the material after thinking through and integrating the information.

Although these findings are encouraging, there is no guarantee that the positive effects experienced by some participants immediately after completing a course will be permanent or long-lived. Will the change in knowledge and attitudes translate into action?

The literature addressing education for professionals working with persons with HIV infection echoes a response increasingly found in the literature dealing with education for culture-, ethnic-, and gender-sensitive practice (Granger & Portner, 1985; Ifil, 1989; Macks, 1988; Proctor & Davis, 1983). In general, these articles suggest a greater emphasis on affectively oriented approaches to learning, the goal being to capture the essence of field experience within a classroom setting (Ifil, 1989).

For example, in speaking about the preparation of staff to work with clients with HIV infection, Furstenberg and Olson (1984) pointed out that "preparation . . . is not solely a question of facts, but of helping people to raise consciousness, express and begin to work through their feelings and fears" (p. 56). Lopez and Getzel (1984) came to a similar conclusion, stressing that training programs must not focus exclusively on medical management, but must deal with the underlying issues of cultural lifestyle. Others (Van Servellen et al., 1988) have proposed that longer educational programs with experiential components guided by principles of attitudinal change are more likely to positively affect behavior.

For this very reason, classroom experiences offered in the UMBC courses provided values clarification exercises. One exercise that the students particularly enjoyed asked them to physically place themselves on an imaginary Likert scale line demonstrating their level of agreement with statements such as "Persons with AIDS have no one to blame but

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themselves." This got the whole group actively involved and promoted discussion, as students were encouraged to share why they took a particular value position.

Although there is growing evidence to suggest that longer programs that allow for an experiential component are more effective in changing negative attitudes toward clients, there clearly is a need for additional research to clarify the bearing of attitude change on practice behaviors (Proctor & Davis, 1983). Ideally, a follow-up outcome study of participants would shed light on this issue.

In spite of the limitations on generalizing these study findings and the presence of alternative explanations of level of change, those considering offering a course should be encouraged. The challenge is to provide the time and opportunity for the participants to process information and to grapple with the moral and social conflicts they may have about serving this client population. ■

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