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Care of the AIDS Patient  
A Study of the Psychological Impact on  
Second Year Diploma Nursing Students in Manitoba

A Thesis  
Submitted to the Faculty of Graduate Studies  
at the University of Manitoba  
in Partial Fulfillment  
of the Requirements for the Degree  
Master of Education

by  
Deborah Thorlakson  
May, 1989

CARE OF THE AIDS PATIENT - A STUDY OF THE PSYCHOLOGICAL  
IMPACT ON SECOND YEAR DIPLOMA NURSING STUDENTS IN MANITOBA

BY

DEBORAH THORLAKSON

A thesis submitted to the Faculty of Graduate Studies of  
the University of Manitoba in partial fulfillment of the requirements  
of the degree of

MASTER OF EDUCATION

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## Table of Contents

	<u>Page</u>	
Abstract	ii	
Acknowledgements	iv	
List of Tables	v	
<u>Chapter</u>		
I	Introduction	1
	General Background	2
	Statement of the Problem	7
	Research Hypotheses	10
	Definitions	11
	Assumptions	12
	Limitations	13
II	Literature Review	14
	Overview	14
	Attitudes and/or Anxiety Toward Death and Dying	14
	Psychological Impact of AIDS on the Health Care Professional:	19
	Fear of Contagion	21
	Death Anxiety	23
	Homophobia	25
	Attitudes of the Health Care Professional Toward AIDS	27
III	Methods	34
	Subject Selection	34
	Instrument Selection	34
	State-Trait Anxiety Inventory (STAI)	35
	Collett-Lester Death Anxiety Scale	38
	Knowledge of AIDS Transmission and AIDS-phobia Scale	40

<u>Chapter</u>		<u>Page</u>
	Procedure	41
	Data Analysis	42
IV	Findings	48
	Hypothesis 1a and 1b	48
	Hypothesis 2a and 2b	52
	Hypothesis 3	54
	Hypothesis 4	57
	Hypothesis 5	60
	Summary	68
V	Discussion	70
	Summary	70
	Conclusions	75
	State-Trait Anxiety and AIDS-phobia	75
	Death Anxiety and AIDS-phobia	77
	Knowledge of AIDS Transmission and AIDS-phobia	78
	The Demographic Variables in Relation to AIDS-phobia	80
	Comparison With Other Studies	83
	Limitations	86
	Recommendations	88
	Research Recommendations	93
VI	References	96
VII	List of Appendices	105
	Appendix "A"	106
	Appendix "B"	115
	Appendix "C"	117

Abstract

AIDS has precipitated a crisis of fear and anxiety, infiltrating all levels of society, particularly the health care community. The psychological and/or behavioural research concerning AIDS has been very limited. It therefore seemed appropriate that some of these psychological constructs be investigated. The purpose of this study was to determine the relationship between state-trait anxiety, death anxiety, knowledge regarding how AIDS can be transmitted and AIDS-phobia. In addition, this study looked at the influence which demographic variables such as sex, age, marital status, parent status, homophobic status, religion, and having cared for an AIDS patient, had on AIDS-phobia. All second-year diploma nursing students were invited to participate in this survey. The survey took place in 1988, during the months of March, April, May and June. Of the 416 enrolled second-year students, 299 completed the questionnaire. The results indicated that aversion towards homosexuals, fear of dying of others, state anxiety and marital status single were positively related to AIDS-phobia. Knowledge of AIDS transmission and AIDS-phobia were negatively related. The findings

of this study appear to support the stance that caring for an AIDS patient can potentially cause some serious psychological ramifications for the care giver and in turn affect the quality of care the patient receives. Aside from presenting factual information about the disease, educators need to address the issues of death and dying, anxiety and homophobia in relation to AIDS in an attempt to reduce some of the stresses experienced at both the undergraduate and graduate level.

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## List of Tables

<u>Table</u>	<u>Page</u>
1. AIDS-phobia Distribution of Items	50
2. Pearson's Correlation Coefficient Scores for State-Trait Anxiety in Relation to AIDS-phobia	52
3. Summary of the Multiple Regression Results for Independent Variables: Trait Anxiety, State Anxiety and Dependent Variable AIDS-phobia	53
4. Score Ranges and Score Means for the Collett-Lester Death Anxiety Score	55
5. Summary of the Multiple Regression Results for Independent Variables: Dying of Others, State Anxiety, Death of Self, Death of Others, Dying of Self, Trait Anxiety and Dependent Variable AIDS-phobia	56
6. Summary of the Percentage of the Respondents who believed AIDS could be transmitted in the following ways	58
7. Summary of the Multiple Regression Results for Independent Variables: Students Knowledge, Death-Anxiety Subscales, State-Trait Anxiety and Dependent Variable AIDS-phobia	59
8. Age Distribution of Respondents	61
9. Summary of the Remaining Demographic Variables	62
10. Coding of the Independent Variables	63
11. Summary of the Multiple Regression Results for Independent Variables: State-Trait Anxiety, Death Anxiety, Student Knowledge, all the Demographic Variables, and Dependent Variable AIDS-phobia	64
12. Summary of the Significant Independent Variables following Step-Wise Multiple Regression	65
13. Final Values for All Independent Variables with AIDS-phobia as the Dependent Variable.	66

## CHAPTER I

Introduction

The history of medicine is replete with epidemics tragically affecting the lives of countless thousands of individuals, however, no disease over the last century has been as complex as Acquired Immunodeficiency Syndrome - AIDS (Silverman, 1986). AIDS has precipitated a crisis of fear and anxiety infiltrating all levels of society, particularly the health care community.

The annual incidence of AIDS is constantly escalating. In December, 1987, the Federal Centre for AIDS in Ottawa projected that the number of reported cases is doubling every 13 months, thus it seems unlikely that the care-giver -- especially the nurse -- will be able to completely avoid contact with an AIDS patient at some time in his/her professional career. This same surveillance update indicated that 1405 cases of AIDS had been reported in Canada. Of these, 730, or 52% have died. Because of the high AIDS mortality rate, the care-giver experiences additional anxieties associated with death and dying. It is essential that the care-giver recognize these anxieties and attempt to resolve them prior

to giving care to the AIDS patient.

### General Background

"Although death means different things to different people, one common attitude is fear" (Schrock, Swanson, 1981, p. 214). Health care providers face the spectre of death more frequently than any other group of professionals. Kubler-Ross (1969) has stated that individuals must take a critical look at their own attitudes toward death and dying before they can help the terminally ill patient without feeling anxious or fearful. In the case of an AIDS patient, one's personal feelings of death and dying are complicated by an additional anxiety about the disease AIDS and the dying patient. The health care professional's attitude toward this condition might impair his/her ability to give care. The study of the effects of death anxiety on quality of care is limited, however, it seems logical to argue that any form of anxiety reduces the individual's ability to perform tasks in a setting where anxiety is aroused. If this seems reasonable, then the anxiety state will most likely be magnified if the dying patient is dying of AIDS (Denton & Wisenbaker, 1977).

In 1950, Hoch and Zubin stated "... anxiety is the

most pervasive psychological phenomenon of modern society" (Levitt, 1966, p. 1). Almost forty years later, this phenomenon of anxiety continues to be a focus for much research and study, however, theories regarding the origins of anxiety remain at a relatively imperfect state due to the limited pool of empirical data.

A comprehensive theory of anxiety should investigate a relationship involving three separate anxiety concepts: "anxiety as a transitory state, anxiety as a complex process that involves stress and threat, and anxiety as a personality trait" (Spielberger, 1972, p. 492). This state-trait concept of anxiety appears to reflect the most current views of anxiety and will therefore be used as a conceptual framework for this study.

The state-trait dichotomy of anxiety factors was first identified following factor analytic studies on anxiety concepts conducted by Cattell and Scheier in 1958. Spielberger (1966) suggests that there is general agreement that anxiety states (A-states) are characterized by subjective, consciously perceived feelings of apprehension and tension, accompanied by or associated with activation or arousal of the autonomic nervous

system. Anxiety as a personality trait (A-trait) implies a motive or acquired behavioural disposition that predisposes an individual to perceive a wide range of objectively non-dangerous circumstances as threatening, thus responding with A-state reactions disproportionate in intensity to the magnitude of the objective danger. A-trait is assumed to reflect residues of past experience that in some way determines individual differences in anxiety-proneness (Spielberger, 1966, p. 17, 18). Spielberger also recognized the importance of cognitive factors in the arousal of anxiety as an emotional state. He explains that through sensory and cognitive appraisal mechanisms, the A-state reaction may serve as a signal that initiates a behaviour sequence designed to avoid or otherwise deal directly with the danger situation. Lazarus and Averill (1972) support this, and, in addition, believe that cognitive appraisal mechanisms constitute the most important criteria for distinguishing one emotional syndrome from another. Lazarus and Opton (1965) earlier contended that the arousal of A-states involves a process or sequence of temporally ordered events which might be initiated by an external stimulus, for example, the threat of contagion from exposure to an AIDS patient, or an internal cue such as

a thought or sensory representation of muscular or visceral activity associated with "feeling hostile". If the stimulus situation is cognitively appraised as dangerous or threatening, then an A-state reaction occurs. It has become apparent that being able to differentiate between this transitory anxiety which seems to be an inherent component of the individual's personality and a specific anxiety state including the precipitating stimulus and triggered internal defence mechanisms, could be instrumental in trying to decrease the anxiety to a level which promotes productivity and performance.

In order to better understand the state-trait distinction, it is important to understand the concept of anxiety as a process including "a sequence of cognitive, affective, and behavioural responses that occur as a reaction to some form of stress" (Spielberger, 1972, p. 484). This process might be externally or internally initiated with an anxiety state reaction occurring after the stress is cognitively appraised as being dangerous or threatening. Thus the temporally ordered sequence of events is as follows:

$$\text{STRESS} \begin{array}{c} \xrightarrow{\text{EXTERNAL}} \\ \xrightarrow{\text{INTERNAL}} \end{array} \text{COGNITIVE PERCEPTION OF A DANGER OR THREAT}$$

—————→ A-STATE REACTION.  
(Spielberger, 1972, p. 484)

Because A-state reactions are not pleasant, the individual can reduce the anxiety by:

1. cognitively reassessing the stress that precipitated the anxiety and initiating the appropriate coping mechanism;
2. employing avoidance behaviour - removing the individual from the stress;
3. utilizing psychological defenses such as repression, denial, projection, in order to alter the individual's perception of danger or threat which caused the anxiety state to occur.

Thus, a subsequent sequence might evolve:



(Spielberger, 1972, p. 485)

To summarize briefly, anxieties are embedded in a complex process. In looking at the phenomenon of anxiety with respect to this study, the following concepts are involved: stress regarding the dying AIDS patient, threat of contagion from the AIDS virus resulting in an A-state, cognitive appraisal and reappraisal concerning knowledge of how AIDS is transmitted and feelings about death and dying, and utilizations of psychological defenses, coping mechanisms, and/or avoidance behaviours in an effort to reduce the A-state. The concept of anxiety proneness or trait anxiety is charac-

terized by a class of constructs which Campbell (1963) has called acquired behavioural dispositions. These constructs might include social attitudes towards minority groups perceived by society as undeserving of care, such as homosexuals and drug abusers, and also remnants of past experiences with death, serious illness and/or contagious diseases might predispose an individual to view the world in a specific way in which certain stimulus situations are interpreted as dangerous, resulting in the manifestation of a state anxiety reaction (Spielberger, 1966; Lev, 1986).

#### Statement of the Problem

The public reaction to AIDS has been one of classic epidemic behaviour. From an historical perspective, epidemic illness has been viewed as a form of religious retribution as punishment for sins. Like the plague of Athens, the Antonine Plague, the Justinian Plague and the "Black Death", many see AIDS as a modern-day equivalent imposed as a punishment for unnatural conduct. This ethos is too frequently perpetuated by the media, with headlines such as "GAY PLAGUE", "LETHAL SCOURGE", "INNOCENT VICTIMS INFECTED BY THE GUILTY". It is understandable that the fears and anxieties which have been generated by the uncertainties of this disease have not

dissipated immeasurably since the advent of the AIDS virus (Cassens, 1985; Kayal, 1985; Loewy, 1986; Rubinow, 1986; Somerville, 1986). For the health-care provider, these fears and anxieties can in turn result in denial of the problem, impaired self-efficacy and maladaptive coping behaviours (Ostrow, Gayle, 1986). Other stressors which might induce A-states include: 1) fear of contagion/death; 2) young age of the afflicted; 3) repetitive deaths of patients; 4) deterioration of the patients' biopsychosocial status; 5) need for extra precautions, and 6) target of patients' anger and/or alienation of own personal support systems. Additional stress also might be experienced if the care-giver exhibits adverse feelings or A-traits towards homosexuality, bisexuality, drug abuse or other minority cultures. Trying to suppress these A-traits in order to deliver care could result in further A-states arising (Salisbury, 1986). The primary defense in penetrating this destructive cycle of anxiety may be education. The educational needs of the care-giver need to be addressed before the AIDS patient can be provided with optimal care. It is essential however, that the educator acknowledge the psychological components of his/her target audience to ensure that the information being given is in fact what the

receiver needs to know to facilitate a reduction in anxiety, performance improvement and job satisfaction (Salisbury, 1986; Solomon, 1986).

The empirical research in AIDS thus far has been essentially directed toward the medical or scientific aspects of the syndrome, that is, finding a treatment, isolating and identifying infectious agents, determining demographic and life-style characteristics which might increase individual risk of exposure to the AIDS virus. Psychosocial and/or behavioural research has been, to a large extent, absent from the literature, however, this nature of research might be quintessential to providing understanding and treatment of the AIDS patient. AIDS has profound psychological ramifications not just on society as a whole and the AIDS patient, but on the entire health-care system and the individuals within it (Coates, 1984; Loewy, 1986; Marten, 1984; McKusick, 1986). Because of the gap which exists in the psychosocial research of AIDS, it would seem timely and relevant to develop studies to address these issues, and of particular relevance is the investigation of some of the psychological constructs in relation to AIDS, exhibited by the future care-givers within the health care system in Manitoba.

The purpose of this study was to determine the relationship between state-trait anxiety, death anxiety, knowledge regarding how AIDS can be transmitted and AIDS-phobia in second year diploma nursing students. In addition, this study looked at the influence which demographic variables such as sex, age, marital status, parent status, homophobic status, caring for an AIDS patient, and religion, had on AIDS-phobia.

#### Research Hypotheses

The following research hypotheses were investigated:

- H(R) 1a and H(R) 1b - There will be a relationship between trait anxiety and AIDS-phobia.
- There will be a relationship between state anxiety and AIDS-phobia.
- H(R) 2a and H(R) 2b - There will be a relationship between trait anxiety and AIDS-phobia when state anxiety scores have been controlled for.
- There will be a relationship between state anxiety and AIDS-phobia when trait anxiety scores have been controlled for.
- H(R) 3 - There will be a relationship between death anxiety and AIDS-phobia when state-trait anxiety scores have been controlled for.
- H(R) 4 - A negative relationship will exist between the students' level of knowledge of how the AIDS virus is transmitted and their level of AIDS-phobia when state-trait anxiety and death

anxiety scores have been controlled for.

- H(R)5a and H(R)5b - The demographic variables (sex, age, marital status, parent status, homophobic status, caring for an AIDS patient, and religion) will be related to the students' AIDS-phobia scores when anxiety levels (state-trait anxiety scores and death anxiety scores) and AIDS knowledge are controlled for.
- Anxiety level (state-trait and death anxiety) and AIDS knowledge will be related to the students' AIDS-phobia scores when the demographic variables have been controlled for.

### Definitions

The demographic variables are self-defining. The following terms are defined to delineate the boundaries and avoid misinterpretation of certain descriptors frequently used in this study.

<u>AIDS</u>	Acquired Immunodeficiency Syndrome
<u>AIDS-PHOBIA</u>	An irrational, excessive and persistent dread of AIDS involving an overwhelming apprehension regarding contagion and death from the disease when exposed to individuals who have AIDS.
<u>ATTITUDE</u>	"An evaluative, affective reaction based upon and reflecting the evaluative concepts and beliefs which have been learned about the characteristics of a social object or class of social objects" (Gow, Williams, 1977, p. 192).
<u>BEHAVIOUR</u>	A component of attitude which includes any observable, recordable and measurable act, movement, or response of an individual" (Lev, 1986, p. 849).

<u>FEAR OF DEATH AND/OR DEATH ANXIETY</u>	"Amorphous and unspecified anxieties about the many unknowns associated with death: we do not know when, where, or how we will die, or if there is an after-life" (Schultz, 1979, p. 69-70).
<u>HOMOPHOBIA</u>	The irrational fear of love and affection between members of the same sex (Messing, Schoenberg, Stephens, 1984).
<u>STATE ANXIETY</u>	"A transitory state characterized by subjective consciously perceived feelings of apprehension and tension accompanied by or associated with arousal of the autonomic nervous system" (Spielberger, 1966, p. 17).
<u>TRAIT ANXIETY</u>	"Implies a motive or acquired behavioural disposition that predisposes an individual to perceive a wide range of objectively non-dangerous circumstances as threatening, and responding with an A-state reaction disproportionate in intensity to the magnitude of the objective danger" (Spielberger, 1966, p. 17).

### Assumptions

The following assumptions were made before embarking on the study:

1. That the investigator would administer the questionnaire in the same, impartial way to all subjects.
2. That the classroom conditions and variances in the time and date of administering the questionnaire in each school would not affect the subjects' responses.
3. That each school participating would be similar enough so that the data collected could be used as a total set.

Limitations

The limitations which might affect the data are as follows:

1. The determination of validity and reliability of the AIDS-phobia and AIDS knowledge portion of the questionnaire had only been tested on hospital workers in a major AIDS patient care facility in Massachusetts.
2. Surveying students near the end of an academic year might result in fewer subjects participating since there is the tendency for students to not attend class.

## CHAPTER II

Literature Review

Research which investigated the area of anxiety and/or death anxiety in relation to AIDS-phobia was totally absent from the literature. Therefore, the literature reviewed focused on three areas of study:

1. empirical studies related to attitudes and/or anxieties of care-givers toward death and dying;
2. expert opinion related to the psychological impact of AIDS on the health care professional, and
3. empirical studies examining the attitudes of care-givers toward AIDS and the AIDS patient.

Attitudes and/or Anxiety Towards Death and Dying

Empirical studies on the relationship between death anxiety and AIDS-phobia are non-existent, therefore the investigator reviewed the literature which looked at attitude and/or anxiety toward death and dying. The purpose of this review was to define some of the variables which influence death anxiety and to what extent, if any, increased death anxiety interferes with the care the dying patient receives. The majority of the literature reviewed suggested either directly or indirectly that the care-giver needs to address his or her own feelings

towards death and dying before he or she can effectively care for the terminally ill patient without experiencing anxiety (Kubler-Ross, 1969; Artiss & Levine, 1973; Yeaworth, Koop & Winget, 1974; Lester, Getty & Kneisl, 1974; Buckingham & associates, 1976; Denton & Wisenbaker, 1977; Shady, 1977; Campbell, 1980; Cook-Coolbeth & Sullivan, 1984; Yancik, 1984; Korte, 1986; Jordan, Ellis & Grallo, 1986).

Many of the studies examined indicated that the variables having the greatest impact on death anxiety were: direct experience with the dying patient, age, and death education (either formal or informal). Shusterman and Sechrest (1973) looked at the attitudes of registered nurses towards death. With the use of the Collett-Lester Death Anxiety Scale, they found a negative correlation between fear of death of others with both age and experience ( $r = .38$  and  $.35$  respectively). "It may be that nurses, as they get older, become desensitized to the fear of death of others because of its frequency for them and because of their expectation of it in the natural course of things" (Shusterman & Sechrest, 1973, p. 423). It is worth mentioning, however, that this correlation between age and experience and other death anxiety subscales was not evident, thus the external

validity remains uncertain. Gow and Williams, 1977, reported that younger nurses had higher anxiety levels, poorer perceptions of caring for the dying and more negative attitudes, while nurses over 40 years of age appeared to experience less anxiety and were more receptive to caring for the dying patient. Korte's study (1985) of death anxiety in registered nurses supported Gow and Williams, and found that older, more experienced nurses had lower mean death anxiety scores. Martin and Collier (1975) and Schrock and Swanson (1981) reported similar findings to direct-care experience with a dying patient. It was observed that direct care of the dying patient did have a favourable effect on the care-giver's attitude towards death and much more so than indirect care. Four studies did not find this to be true. Feifel (1967) felt that one of the reasons physicians choose the medical profession is to master their fear of death, however, upon examining the attitudes of physicians and medical students, it was found that physicians were more fearful of death than the students. This seems to suggest that increased experience with dying patients increases rather than decreases one's fear of death. Lester (1974) observed similar findings with nursing students, suggesting that increased experience with death might in fact

increase death anxiety.

Denton and Wisenbaker (1977) looked at the relationship between death experience and death anxiety and found that nursing students with minimal or no experience with death had lower death anxiety scores than graduate nurses with experience. Cook-Coolbeth and Sullivan (1984) looked at university nursing students and discovered that personal exposure to a dying patient at or near the time of death had no effect on their attitude toward death.

Several studies also looked at the effects of death education on attitude toward death and death anxiety. Lester and associates (1974) investigated death anxiety in undergraduate, graduate nursing students and nursing faculty at New York State University. A 57-item questionnaire consisting of items from a death attitude instrument compiled and validated by Lester in 1967 and a death anxiety scale completed and validated by Collett-Lester in 1969, was used. In general, the results indicated that fear of death and dying scores did decrease with increased academic preparation. Yeaworth and associates (1974) looked at the differences in attitudes or beliefs about death and dying in freshman and senior nursing students. An instrument was developed by an

interdisciplinary team, however, validity and reliability statistics were not available. Overall, the results of this questionnaire indicated that there was a shift in attitude about death and dying, and the students felt their education had a definite influence. Two studies supported this: Martin and Collier (1975) surveyed third year university nursing students. Upon asking students which factor affected their attitude towards death the most, it was indicated that the seminar on death and grief and grieving had the greatest impact. A second study was conducted by Cook-Coolbeth and Sullivan (1984). A modified version of Hopping's Death Attitude Indicator was administered to sophomore and senior university nursing students. The results indicated that academic exposure did have a significant effect on attitude to death ( $f = 7.53$ ). Unfortunately, reliability and validity statistics were again unavailable for both instruments, therefore, internal and external validity might be questioned. Only one study found conflicting results. Korte (1985) looked at death anxiety in registered nurses utilizing Templer's Death Anxiety Scale. She found that there was no significant relationship between death anxiety and level of education. The type of education was not specified. It was suggested that formal nursing

and in-service education should address death anxiety, and that providing a forum for sharing anxieties regarding death could be beneficial.

Although there appeared to be some conflicting information with regard to the effect which experience, age and death education have on death anxiety, overall, the literature seems to suggest that death anxiety might be decreased with education and direct-care experience. It also was evident from the literature that the caregiver's level of death anxiety could have a significant effect on the care a dying patient receives, thus making death anxiety a variable which warrants continued investigation.

#### Psychological Impact of AIDS on the Health Care Professional

Since the AIDS virus was first identified in 1981, there has been a plethora of information regarding the epidemiology, verology, pathology and immunology of the disease. The psychological implications of this disease were almost absent, however, about 1984 this changed. Although the scientific articles continued to abound, the scope of the disease had broadened to include the psychosocial impact of AIDS on society.

The myriad of psychological factors associated with AIDS has made this disease a mental health, as well as a public health, emergency (Batchelor, 1984).

Significant psychological concerns have surfaced among many health-care workers. Having adequate knowledge of a disease or an intellectual understanding of why a particular behaviour occurs will not ensure that the care-giver will react non-judgmentally and compassionately when confronted with the AIDS patient. Simmons-Alling (1984) states that health care-givers are "socialized to be guided in relationships by the concepts of emotional involvement, acceptance, non-judgmental attitude and objectivity; therefore, to have conflict or ambivalence about these concepts leads to discomfort" (p. 32). The anxiety that evolves as a result of the uncertainty and fear created by AIDS will undoubtedly impair the care-giver's ability to utilize these concepts (Simmons-Alling, 1984; Morin & Batchelor, 1984; Christ & Wiener, 1985; Dunkel & Hatfield, 1986; Somerville, 1986). Ostrow (1986) also points out that in addition to the anxiety which results from uncertainty, frustration, fear and ignorance, there is often an hysterical, emotional and sometimes irrational component associated with AIDS. If this aspect is not circumvented,

then the losses in terms of human dignity, compassion and kindness will be devastating, not just for the AIDS patient but for all concerned (Forstein, 1986).

The majority of the articles addressing the psychological impact of AIDS have identified three sources of anxiety frequently experienced by the care-giver: fear of contagion, death anxiety, and homophobia. These will be discussed individually.

#### Fear of Contagion

Personal vulnerability to AIDS initially evoked considerable stress in the care-giver. The perception that AIDS or the human immunodeficiency virus (HIV) is highly contagious is untrue. Gerberding and Sande (1987) reported that risk to the health care worker was extremely low. In a study conducted in several U.S. medical centres, the risk of infection after accidental parenteral inoculation, was less than 1% (4 out of 2,400 highly exposed care-givers in which 800 subjects had a history of needlestick or equivalent exposure). Lifson and colleagues (1986) had previously reported similar findings following analysis of national surveillance data of health care workers with AIDS. Decker (1986), Smith (1987) and Friedland (1987) all concurred that the risk of contagion was negligible and non-existent if

proper infection-control precautions were observed. Goodacre (1987) was less optimistic and stated that "despite the reports of a low incidence after occupational exposure, seroconversion can occur after even a single superficial needlestick and the evidence now suggests that at least 90% of seroconverters will eventually have symptoms." Thus, despite the epidemiological evidence indicating a very low occupational risk of HIV to the care-giver, many health care workers continue to perceive themselves at risk and experience considerable anxiety when faced with exposure to the AIDS patient (Holland & Tross, 1985; Dunkel & Hatfield, 1986; Ostrow, 1986; Frezrer, 1986; Ostrow & Gayle, 1986; Wolcott, 1986; Salisbury, 1986).

This fear of contagion was thought to be primarily due to a lack of knowledge regarding transmission of the virus and perhaps inexperience in actually caring for the AIDS patient. Morrison (1984) stated that the key to demystifying AIDS is educating the care-giver about the disease and what precautions to take when caring for the AIDS patient. Amchin and Polon (1986) supported this and further stated that lack of scientific knowledge and the care-giver's lack of experience with AIDS patients seemed to invite speculation about the dangers inherent

in treatment, however, when staff had a chance to improve their knowledge about the disease and gain experience in treating AIDS patients, their initial anxieties diminished somewhat. Unfortunately, anxiety doesn't always dissipate with increased cognitive awareness. Continued and prolonged anxiety states are usually a result of the caregiver having to confront "complex psychologic issues of homosexuality, morality and mortality evoked by AIDS patients" (Gerberding and Sande, 1987, p. 12). These anxieties can interfere with the quality of care the AIDS patient receives (Selzer & Prince, 1985; Holland & Tross, 1985; Amchin & Polon, 1986).

#### Death Anxiety

AIDS has a uniform fatality. All individuals diagnosed with AIDS will ultimately die from the disease - there is no cure. Having to care for a young male or female (as AIDS patients often are) who is rapidly deteriorating physically, mentally and emotionally, can impose immense stress on the care-giver -- a stress with which many feel unprepared to deal (Rubinow, 1986; Wachter, 1986). As with any terminal illness, the care-giver must take the opportunity to examine his/her own feelings about death and dying. It is not uncommon for caregivers to experience anticipatory grieving for the dying

AIDS patient, actual grief with the patient's death, frustration over the inability to alter the course of the illness and dismay over the negative response from others (Holland & Tross, 1985; Frezrer, 1986). Facing mortality, their own and that of the patient, was a frequent encounter for most care-givers. The entire process of death and dying can be a tremendous drain. For some, this is a new experience upon which the anxiety is compounded by the fact that these patients might be similar in age and background. Others question whether the attachment which can ensue as a result of providing quality care is worth the emotional conflict encountered. Thus the care-giver is often torn between trying to avoid death and dying, and delivering the best care possible (Simmons-Alling, 1984; Gerberding & Sande, 1987). Gerberding and Sande (1987) further state that because AIDS is incurable, death of the AIDS patient can be equated with professional failure, resulting in yet more anxiety. This stance was supported by Simmons-Alling (1984), Dunkel & Hatfield (1986) and Wachter (1986). Because this vale of death often seems ubiquitous, many health care-givers use avoidance coping, isolating themselves in an attempt to reduce the anxiety which caring for the AIDS patient elicits. Simmons-Alling (1984) states "Isolation is a

defence mechanism that protects a person from experiencing anxiety" (p. 34). It seems apparent that the death anxiety variable could have a considerable impact on the quality of care the AIDS patient receives.

#### Homophobia

Furstenberg and Meltzer-Olson (1984) state that because the prevalence of AIDS is highest within the homosexual community, the attitudes, beliefs and feelings the care-giver has about homosexuality can play a significant part in how he or she responds to the AIDS patient. They further state that some care-givers view AIDS as a punishment for variant sexual behaviour. This notion was supported in articles by Nichols (1984), Cassens (1985), Selzer and Prince (1985), Somerville (1986) and Steele (1986). Ostrow and Gayle (1986) add that negative and stereotyped attitudes toward homosexuality might surface as tacit agreement that the patient's disease is a "divine retribution". As a result, the care-giver might demonstrate a reluctance to providing factual information regarding safer sexual practices, and/or pessimism regarding the benefits health education might have in effecting behavioural change in the "gay" community or in other high-risk groups. It is thought that prevailing homophobic attitudes might well generate behaviour which is

counter-therapeutic and counter-productive, rendering the care-giver less able to be effective with homosexual patients (Petrie, 1986). Klein (1985) indicated that the anxiety experienced by heterosexual doctors when caring for a critically ill patient was sometimes intensified by uneasiness with the patient's sexual orientation. This was supported to some extent in a study of homophobia among physicians and nurses conducted by Douglas, Kalman and Kalman in 1985. They found that mean scores for both groups fell in the low homophobic range. Women were significantly more homophobic than men. Almost 10% of the respondents agreed with the statement "homosexuals who contract AIDS are getting what they deserve". They considered this statistic to be alarming in spite of the poor response rate and felt that for a group of health care professionals, homophobia remains at an undesirable level. Batchelor (1984) states that it is essential for the care-giver to confront his/her own homophobic and/or racist attitudes prior to treating the AIDS patient. If after doing so they find they cannot accept these patients interacting with them directly, professionally and with understanding, then it is their responsibility to remove themselves from the patient's care, because regardless of a patient's personal life-style, he is

entitled to quality care, sensitively-delivered (Voth, 1983).

Attitudes of the Health Care Professional  
Towards AIDS

Thirteen studies were reviewed. All studies look at various combinations of knowledge, homophobia and attitude, including AIDS-stress, AIDS-phobia and death anxiety, in relation to AIDS and/or the AIDS patient.

Knowledge of AIDS with regard to modes of transmission, testing, risk factors and/or risk groups was not positively correlated with increased anxiety or stress. Rosse (1985) surveyed nursing staff following the admission of an AIDS patient to the ward. Although 73% thought AIDS could be transmitted by casual inter-personal contact or by airborne transmission, only 36% were assessed as having high anxiety. Price, Desmond and Kukulka (1985) reported similar findings in a study of high-school students between 16 and 19 years of age. Out of the 19 items which tested knowledge, more than 50% of the students answered 12 of the questions incorrectly, however, when asked if they were worried about getting AIDS, 73% stated that they were not. Gerbert (1987), in a random sample of California dentists, found that although the

respondents' factual knowledge about AIDS was relatively good, nearly 75% of dentists stated that they were reluctant to care for patients with AIDS and would prefer to refer those individuals rather than accept them as patients. Both Searle (1987) and Blumenfield and associates (1987) felt that the health care-givers surveyed had insufficient knowledge regarding AIDS but this was not significantly correlated with any other variable. Two studies looked at knowledge, attitudes towards AIDS and homosexuality. Morton and McManus (1986) surveyed 1st and 2nd year medical students at University College, London. They found that "attitudes to AIDS showed no correlation with knowledge but correlated strongly with attitudes to homosexuality" (p. 1212). They further stated that the emphasis on education should be directed toward information regarding homosexuality rather than factual details of the disease. O'Donnell and associates (1987) administered questionnaires to professional and technical-level health care workers at a major AIDS patient care facility in Massachusetts. Significant correlations were observed between "Homophobia and AIDS-phobia ( $r = 0.62$ ), AIDS-phobia and AIDS-stress ( $r = 0.55$ ), also Homophobia and AIDS-stress ( $r = 0.41$ )" (p. 281). These were significant at the 0.01 level. No correlation was

observed between AIDS-phobia, AIDS-stress or homophobia and the amount of contact care-givers had with the AIDS patient or the level of knowledge regarding the clinical and epidemiological aspects of AIDS. A subsequent study, which looked at the effects of in-service education on knowledge, perceived risks and stresses did indicate that "attendance at in-service education programs was associated with reduction in stress, perceived risk and discomfort around patients" (O'Donnell, 1987, p. 279).

Four studies investigated attitudes towards homosexuals in relation to AIDS. Douglas, Kalman and Kalman (1985) looked at homophobia among physicians and nurses. Those surveyed fell in the low homophobic range with men having a significantly lower homophobia score than women. There was no correlation with the level of homophobia and the demographic variables of marital status, age, years of experience and religious affiliation. Although having a close "gay" friend or relative did reduce personal anxiety about homosexuals in both groups, only nurses reported reduced anxiety after having worked with a "gay" colleague. "While increased contact with homosexuals may serve to dispel false stereotypes and lessen homophobia in some individuals, it may heighten anxiety and elicit greater hostility in others if those stereotypes served

important defensive functions" (p. 1311). Barker-Bausell and associates (1986) conducted a national poll to determine public perceptions regarding AIDS. Using a random digit dialing procedure, telephone interviews of 1256 individuals 18 years of age and over, took place. One of the survey questions asked if "the government should restrict the behaviour of homosexuals and bisexuals in gay bars and bath houses until AIDS is under control" (p. 255). The results indicated that 50% of the sample were strongly in favour of imposing restrictions on "gays". The study did not imply however, that this was suggestive of a negative perception toward alternative sexual life-styles. Kelly and associates (1987) reported some conflicting data when they conducted a random survey of physicians in Columbus, Ohio; Phoenix, Arizona; and Memphis, Tennessee. The purpose of the study was to determine whether physicians negatively stigmatize AIDS patients and patients with "gay" life-styles. Subjects received a packet containing a 500-word patient vignette and three inventories: Prejudicial Evaluation Scale, Social Interacter Scale and Interpersonal Evaluation Inventory. The vignette received was randomly determined - one patient being a homosexual with AIDS, the other being a heterosexual with leukemia. The results indicated a

consistently negative bias related to AIDS patients. Physicians felt AIDS patients were responsible for their own illness and deserved what they got; they were less willing to engage in conversation with an AIDS patient or even interact at a very casual level. While their attitude towards the AIDS patient was considerably harsher than that towards the leukemia patient, a definitive, negative attitude towards homosexuality was vague. It was felt that physicians might be reacting negatively to the AIDS patient based on "presumptions about the patient's past homosexual promiscuity rather than his sexual preference" (p. 791). Reed, Wise and Mann (1984) surveyed attitudes towards homosexuality and experience with AIDS patients in a tertiary care metropolitan hospital, but results were inconclusive because of exceptionally poor response rate (18%) and questionable instrumentation.

The final study looked more specifically at anxiety and stress. Horstman and McKusick (1986) surveyed San Francisco Bay physicians. They found that 56% reported more stress working with AIDS patients but only 46% reported increased fear of death and 44% increased anxiety. Interestingly, "gay"-identified physicians were more likely than their heterosexual counterparts to have

experienced increased anxiety stress and fear of death. It was felt that this was primarily because of the "gay" physician's perceived increased risk for AIDS.

Upon reviewing the studies, only five studies achieved a return rate of 70% or more (Price, 1985; Rosse, 1985; O'Donnell, 1987; Searle, 1987; Barker-Bausell, 1986). Five studies achieved returns between 50% and 69% (Horstman & McKusick, 1986; Morton & McManus, 1986; O'Donnell & O'Donnell, 1987; Blumenfield, 1987; Gerbert, 1987). The remainder had less than 50% of their questionnaires returned. Another point concerns the instrumentation. Only four of the thirteen studies discussed the reliability and validity of the instrument used (Douglas, Kalman & Kalman, 1985; Price, Desmond & Kukulka, 1985; Morton & McManus, 1986; O'Donnell, 1987). Of these, only three achieved returns over 50%. Thus, the conclusion drawn from this research is limited.

In summary, based on the three studies which might be considered valid from an empirical standpoint, it has been noted that in spite of the initial fear that was sparked as a result of insufficient information regarding AIDS, the anxiety and stress that has persisted in many health care-givers seems to be largely a result of

their negative feelings toward homosexuals and the additional pressure of caring for a very sick individual.

## CHAPTER III

Method

The overall design of this study followed a descriptive cross-sectional population survey approach. This method was chosen as it would provide the most efficient and effective means of determining what the current student anxiety status was in relation to AIDS.

Subject Selection

All diploma nursing schools in the Province of Manitoba participated in the survey. This consisted of six schools, five in Winnipeg and one in Brandon. All second-year students were asked to participate on a voluntary basis. Out of the 416 enrolled second-year students, 299 completed the questionnaire providing a response rate of 71.8%. Of the 117 students who did not respond, 80 (68%) did not attend class the day the questionnaire was implemented. Absences were attributable to both illness and truancy. The remaining 37 (32%) chose not to participate because of other commitments outside the school.

Instrument Selection

The questionnaire was divided into four sections

(see Appendix A). The first section collected information regarding the demographic variables of sex, age, marital status, parent status, homophobic status, having cared for an AIDS patient, and religion. The second section focused on state-trait anxiety, with the use of the state-trait anxiety inventory developed by C. Spielberger and R. Gorsuch. The third looked at the level of actual death-anxiety, by utilizing the Collett-Lester Death Anxiety Scale. Finally, the last section determined knowledge regarding AIDS transmission and AIDS-phobia with the use of an instrument developed by L. O'Donnell and associates. The instrumentation for the last three sections is described below.

#### State-Trait Anxiety Inventory (STAI)

Spielberger, Gorsuch and Lushene (1970) began construction of the STAI in 1964 with the aim of developing a single scale which would furnish objective self-report measures of both state and trait anxiety. STAI consists of 40 self-descriptive statements to which the subject responds on a 5-point scale of intensity of the feeling, condition or experience. The subject is asked to respond to the first 20 statements so as to indicate how he/she feels "right now" (state anxiety), and to the second 20 statements to indicate how he/she feels "generally" (trait-anxiety).

Test-retest reliability was conducted using a normative sample of undergraduate students at Vanderbilt University (Spielberger, Gorsuch & Lushene, 1970). The test-retest correlations for the Anxiety-trait scale ranged from 0.73 to 0.86, while those for Anxiety-state ranged from 0.16 to 0.54 with a median  $r$  of 0.32. The low scores for the A-state scale are anticipated as it reflects the influence of various situational factors present at the time of testing. Because of the transitory nature of anxiety states, measures of internal consistency such as the alpha coefficient, provide a more accurate index of the reliability of A-state scales than test-retest correlations. With the use of the Kuder-Richardson formula 20, reliability coefficients for A-state range from 0.83 to 0.93. In summary, both A-trait and A-state scales have a high degree of internal consistency.

Validity was tested by correlating the STAI A-trait scale with the IPAT anxiety scale (Cattell & Scheier, 1963), the Taylor (1953) Manifest Anxiety Scale (TMAS) and the Zuckerman (1960) Affect Adjective Checklist (AACL). The correlations between STAI, and IPAT and the TMAS are fairly high for both college students (0.755, 0.795) and for patients (0.770, 0.830). In contrast, the

Zuckerman Checklist is only moderately correlated (0.550).

Construct validity for the A-state scale was tested by looking at A-state in undergraduate college students at Florida State University. Students were asked to complete the A-state scale under "normal conditions" and then respond according to how they believe they would feel "just prior to a final exam in an important course". Means scores for the norm and exam conditions were calculated for the 20-item A-state scale and for each individual item. Critical ratios for the differences between these means and point-biserial correlations were calculated also. The mean scores for the A-state scale were reported to be appreciably higher in the exam condition for both males (N=332, Norm 40.02, Exam 54.99) and females (N=645, Norm 39.36, Exam 60.51). The degree to which A-state exists in the two experimental conditions is indicated by the size of the critical ratio and the magnitude of the point-biserial correlation. Males CR = 24.14  $r(pb)$  .60, and females CR = 42.13  $r(pb)$  .73. Additional validity information was obtained in a single testing administered to 109 males and 88 females at the same university. Four experimental conditions were tested: normal conditions, relax condition, exam condition and movie condition (depicting several accidents in

wood-working shop). The results of these sessions indicated that students' A-state scores were lowest during the relax condition and highest following the stressful movie. The normal and exam conditions produced similar A-state scores for all students (Spielberger, Gorsuch & Lushene, 1970).

Overall, the "STAI provides a useful and versatile instrument for the measurement of state and trait anxiety; its content, concurrent and construct validity compare favourably with other published tests of anxiety" (Spielberger, Gorsuch & Lushene, 1970, p. 9). In a previous review of several anxiety inventories, Levitt stated that "the STAI was the most carefully developed instrument from both theoretical and methodological standpoint" (1967, p. 71).

#### Collett-Lester Death Anxiety Scale

The Collett-Lester Death Anxiety Scale is comprised of four components which measure fear of death of self, fear of death of others, fear of dying of self, and fear of dying of others. Unlike other death anxiety instruments, this scale attempts to distinguish between "the fear of death from the fear of the process of dying and to differentiate between these fears depending upon

whether they are for oneself or for another" (Collett-Lester, 1969, p. 179). The scale itself consists of 36 items using a six point response ranging from +3 to -3. Total scores can range from -108 indicating low death anxiety to +108 indicating high death anxiety. Lester (1967) determined the parallel-forms reliability to be 0.65 and test-retest reliability over a six-week interval to be 0.58. In a more recent pilot study sampling 99 undergraduate student nurses, the following reliability levels (alpha) were calculated for the four subscales: Death of Self, 0.79; Death of Others, 0.59; Dying of Self, 0.54; Dying of Others, 0.79 (Gow & Degner, 1980).

Validity was tested by correlating the four subscales with Death Anxiety scales developed by: Lester, Boyar, Sarnoff and Corwin and Tolor. Each death scale had its highest correlation with the death of self subscale (0.78 - 0.47). The second highest correlation occurred with the dying of self subscale (0.58 - 0.47). Death of Others and Dying of Others produced relatively low correlations (0.46 - 0.31; 0.40 - 0.36). Ninety-four undergraduate psychology students at Vanderbilt University constituted the sample (47 males and 47 females aged 18 - 27). Similar results were obtained for both

males and females. It was felt that the correlations among the death scales were moderate in strength and statistically significant (Durkak, 1972, p. 547).

#### Knowledge of AIDS Transmission and AIDS-phobia Scale

The questions on disease transmission consisted of 10 items. O'Donnell & associates developed these items based on the types of exposure most frequently experienced by health care workers. The variety of exposures reflected potential modes of transmission ranging from improbable to highly possible (e.g. airborne transmission → blood transfusion). Three response categories were available for each item: "Yes", "Possibly" and "No" (O'Donnell & associates, 1987).

The AIDS-phobia questionnaire contained 16 items. Twelve items utilized a seven-point agree-disagree Likert scale (1 = very strongly agree, and 7 = very strongly disagree). Four additional items looked at social acceptability and activities of individuals with AIDS, three response categories were available for these items.

Both the Knowledge section and the AIDS-phobia section were reviewed by teams of consultants experienced in health-care delivery systems and evaluation research. Several AIDS patients were consulted as well.

A pretest was conducted on an independent sample of health care workers (sample size was not stated), and descriptive statistics were calculated. The index developed for AIDS-phobia was derived empirically from a larger item pool. Index reliability was measured using Cronbach's alpha with those items not contributing to alpha being deleted. The alpha reliability for AIDS-phobia was assessed at 0.76 (O'Donnell & associates, 1987, p. 272-273). No validity measures were reported for these indices.

#### Procedure

The Director of each school was contacted in writing to request permission to survey the students (see Appendix B) and then by telephone to determine whether or not permission had been granted and to arrange a tentative date for implementation. The survey was administered to each group of students by the investigator, to ensure consistency of approach concerning the instructions regarding how to complete the questionnaire (see Appendix A for a sample of the questionnaire). At this time, a brief overview was given, describing the purpose of the study. Student participation was strictly voluntary and anonymity was assured. Students were requested not

to identify themselves on the questionnaire. Those agreeing to participate were asked to sign a consent form as a means of ensuring their voluntary participation and confidentiality (see Appendix C).

The questionnaire was divided into four parts consisting of 109 items in total, and took approximately 10 to 20 minutes to complete. In the first part, the students were requested to place the appropriate number in the box provided to the right of the question. The remaining three parts followed a Likert scale format. Specific directions were provided at the beginning of each section. Upon completion of the questionnaire the student was requested to insert the questionnaire into the envelope provided, seal it and return the envelope to the investigator.

#### Data Analysis

The statistical significance of a relationship observed in a set of data is most often expressed in terms of probabilities. Significance at the 0.05 level ( $p \leq 0.05$ ) means that the probability that an observed relationship will be a result of sampling error exclusively will be no more than 5 times in 100 (Babbie, 1979, p. 485). This level of significance also ensures that

the type I or alpha error will be less than 0.05. Type I error refers to rejecting the null hypothesis when it is true, which would result in mistaken conclusions being drawn about the data collected. In order to guard against type I error, all of the null hypotheses were tested at the 0.05 level of significance. The problem of type II or beta error (failing to reject the null hypothesis when it is false) was minimized due to the size of the sample ( $n = 299$ ). The larger the sample size, the smaller the type II error (Hassard, 1987).

Two statistical procedures were used to test the hypotheses in the analysis of the data. They were: Pearson's Product Moment Correlation Coefficient, and Multiple Regression.

Pearson's Product Moment Correlation Coefficient was used to test the following hypotheses:

H(R)1a - There will be a relationship between trait anxiety and AIDS-phobia,

and

H(R)1b - There will be a relationship between state anxiety and AIDS-phobia.

This procedure is useful when the following conditions are met:

1. both measurements being correlated consist of

continuous data. In this case, both the state-trait anxiety inventory and the AIDS-phobia index did provide continuous data;

2. a linear relationship exists between the variables being correlated; (as anxiety increases so does AIDS-phobia).

The Pearson's Product Moment Correlation Coefficient is, in fact, a special case of the more general Multiple Regression procedure when only one explanatory variable is involved. Aside from determining whether or not a relationship exists, it can also quantify the strength of association between the independent and dependent variables. For example, a large absolute value indicates the variables are closely related, and a small absolute value suggests a weak relationship. In addition, the sign (positive or negative) of the coefficient indicates the direction of the relationship (Glantz, 1981, p. 210; Riegelman, 1981, p. 232; Welkowitz, Ewen & Cohen, 1971, p. 152).

The remaining hypotheses were tested using Multiple Regression. This procedure was chosen as the primary method of analysis for two reasons:

1. it can very elegantly separate out or control for the influence of a number of inter-correlated explanatory variables on a continuous outcome or dependent variable;
2. Stepwise Multiple Regression requires no prior

ordering of the explanatory or predictor variables in terms of the magnitude of their influence on the dependent variable. In addition, it develops a testable model of the cumulative influence of the independent or explanatory variables on the dependent variables.

Each hypothesis will now be discussed individually with regard to what the testing actually involved.

Hypothesis 1a - There will be a relationship between trait anxiety and AIDS-phobia.

Hypothesis 1b - There will be a relationship between state anxiety and AIDS-phobia.

These hypotheses were tested using Pearson's Product Moment Correlation Coefficient by first comparing the individual total scores related to trait anxiety (questions 21 - 40, part B) and then state anxiety (questions 1 - 20, part B) to the individual total scores related to AIDS-phobia (questions 1 - 16, part D) (see Appendix A).

Hypothesis 2a - There will be a relationship between trait anxiety and AIDS-phobia when state anxiety scores have been controlled for.

This hypothesis was tested by using Multiple Regression by comparing the individual total score related to trait anxiety (questions 21 - 40, part B) to the individual

total scores related to AIDS-phobia (questions 1 - 16, part D) while controlling for the influence of state anxiety (questions 1 - 20, part B) (see Appendix A).

Hypothesis 2b - There will be a relationship between state anxiety and AIDS-phobia when trait anxiety scores have been controlled for.

This hypothesis was tested in the same manner as was 2a.

Hypothesis 3 - There will be a relationship between death anxiety and AIDS-phobia when state-trait anxiety scores have been controlled for.

This hypothesis was tested using Multiple Regression to determine the partial correlation between the total death anxiety score (questions 1 - 36, part C) and AIDS-phobia score (questions 1 - 16, part D) after total state anxiety and total trait anxiety scores had been utilized as explanatory or controlling variables. This analysis was repeated for the four sub-scales of the death anxiety instrument:

- \* Death of Self (questions 1, 4, 6, 14, 17, 20, 23, 26 and 28)
- \* Death of Others (questions 2, 7, 9, 13, 18, 19, 21, 17, 32 and 33)
- \* Dying of Self (questions 5, 12, 15, 24, 30 and 36)
- \* Dying of Others (questions 3, 8, 10, 11, 16, 22, 25, 29, 31, 34 and 35)

(see Appendix A)

Hypothesis 4 - A negative relationship will exist between students' level of knowledge of how the AIDS virus is transmitted and their level of AIDS-phobia when state-trait anxiety and death anxiety have been controlled for.

This hypothesis was tested by correlating the total level of knowledge scores (questions 1 - 10, part D) with the AIDS-phobia score after the total state-trait anxiety scores and death anxiety had been utilized as explanatory or controlling variables (see Appendix A).

Hypothesis 5a - The demographic variables will have an influence on the students' AIDS-phobia scores when anxiety level (state-trait anxiety scores and death anxiety scores) and AIDS knowledge are controlled for.

Hypothesis 5b - Anxiety level (state-trait or death anxiety) and AIDS knowledge will have an influence on the students' AIDS-phobia score when the demographic variables have been controlled for.

These hypotheses were tested by using Stepwise Multiple Regression to develop and test a regression equation describing the influence of demographic variables and anxiety levels on AIDS-phobia.

## CHAPTER IV

Findings

In this chapter, the findings gleaned from the analysis of the data collected will be looked at in detail. Each hypothesis will be discussed individually, regarding the significance of the results. Included in this report will be an account of what statistical procedures were applied to the data in order to obtain the results given. In conclusion, a summary of all the significant findings will be presented.

Research Hypotheses H(R)1a and H(R)1b

There will be a relationship between trait anxiety and AIDS-phobia.

There will be a relationship between state anxiety and AIDS-phobia.

Null Hypotheses H( $\emptyset$ )1a and H( $\emptyset$ )1b

There will be no relationship between trait anxiety and AIDS-phobia.

There will be no relationship between state anxiety and AIDS-phobia.

All students participating were administered the Spielberger, Gorsuch and Lushene State-Trait Anxiety Inventory. This inventory consisted of forty items, with items 1 to 20 assessing state anxiety, and items 21 to 40 assessing trait anxiety. Total scores ranged from 20 to

66 for state anxiety with a mean score of 37.098, and 20 to 63 for trait anxiety with a mean score of 34.837. The total scores for both state and trait anxiety could have a possible range of 20 to 80 with the higher score indicating an increase in anxiety level. Students were asked to complete O'Donnell's 16-item AIDS-phobia inventory. The scores for this instrument ranged from -32.00 to +37.00 with a mean score of -4.383. Again, the higher score indicates an increase in AIDS-phobia. Table 1 presents the percentage of respondents who agreed with each statement. A total of 29.3% agreed that "hospital workers should not be required to work with AIDS patients", however, 95.9% felt that "AIDS patients have as much right to quality medical care as anyone else", and 89.0% felt that working with these patients could be a rewarding experience. It is interesting to note that of the 299 students surveyed, only 46 (15.4%) had in fact cared for an AIDS patient. Although 280 (93.6%) of those surveyed were female and at lower risk for contracting AIDS via sexual contact, 63.5% agreed with the statement that "If I got AIDS, I would worry that other people would think I was a homosexual". Over half (53.8%) stated that having a co-worker with AIDS would bother them. When asked about their aversion or dislike towards homosexuals, 38.6% stated that they

Table 1

## AIDS-PHOBIA DISTRIBUTION OF ITEMS

		RESPONSE (% Agree) <sup>1</sup>		
1.	A hospital worker should not be required to work with AIDS patients.	29.3		
2.	AIDS patients have as much right to quality medical care as anyone else.	95.9		
3.	AIDS will make my job a high-risk occupation.	81.5		
4.	AIDS is God's punishment for immorality.	17.9		
5.	Dealing with AIDS patients will be different from dealing with other types of patients.	63.9		
6.	The high cost of treating AIDS patients is unfair to other people in need of care.	15.4		
7.	AIDS patients offend me morally.	17.4		
8.	If I learned that someone I know had AIDS, it would be hard for me to continue my relationship with him/her.	23.8		
9.	Having a co-worker with AIDS will not bother me.	46.2		
10.	If I got AIDS, I would worry that other people would think I was a homosexual.	63.5		
11.	Working with AIDS patients could be a rewarding experience.	89.0		
12.	It is important to go out of your way to be helpful to a patient with AIDS.	70.4		
		YES %	NO %	DON'T KNOW %
13.	Do you think that people with AIDS should be allowed to work in public schools?	62.3	14.0	23.7
14.	Do you think that people with AIDS should be allowed to handle food in restaurants?	34.8	42.5	22.7
15.	Do you think that people with AIDS should be allowed to work with patients in hospitals?	38.5	35.1	26.4
16.	Has the growing number of AIDS cases made you more tolerant, less tolerant or not changed your attitude at all about homosexuality?	% more tolerant	22.5	
		% no change	63.4	
		% less tolerant	14.1	

<sup>1</sup>Items 1-12 used a 6 point agree-disagree scale; 3 = strongly agree, -3 = strongly disagree. Agree = proportion of respondents answering in the 3 - 1 range.

had some aversion and 7% stated that they had substantial aversion. When they were asked about their attitude toward homosexuality with the growing number of AIDS cases, however, only 14.1% stated that they were less tolerant of homosexuals.

The individual total scores for state and trait anxiety were correlated with the individual total scores for AIDS-phobia. The hypotheses were tested using Pearson's Product Moment Correlation Coefficient at 0.05 level of significance. Examination of Table 2 indicates that both state and trait anxiety were related to AIDS-phobia. Although the relationship is fairly weak for both state anxiety at 0.2008 and trait anxiety at 0.2157, the probability that this was due to error is effectively zero, suggesting that the relationship is real. That is to say, there appears to be a positive correlation between both state anxiety and AIDS-phobia, and trait anxiety and AIDS-phobia, indicating that as state-trait anxiety levels increase, so does AIDS-phobia, thus rejecting the null hypothesis that no relationship between these variables exists.

Table 2

PEARSON'S PRODUCT MOMENT CORRELATION  
COEFFICIENT SCORES FOR STATE-TRAIT ANXIETY  
IN RELATION TO AIDS-PHOBIA

	STATE	TRAIT
AIDS-PHOBIA	0.2008*	0.2157*
POPULATION TOTAL	299	299
P= PROBABILITY OF ERROR	0.000	0.000

\*Significant at the 0.05 level.

Research Hypotheses H(R) 2a and H(R) 2b

There will be a relationship between trait anxiety and AIDS-phobia when state anxiety scores have been controlled for.

There will be a relationship between state anxiety and AIDS-phobia when trait anxiety scores have been controlled for.

Null Hypotheses H( $\emptyset$ ) 2a and H( $\emptyset$ ) 2b

There will not be a relationship between trait anxiety and AIDS-phobia when state anxiety scores have been controlled for

There will not be a relationship between state anxiety and AIDS-phobia when trait anxiety scores have been controlled for.

These hypotheses were tested using a Multiple Regression technique. With AIDS-phobia as the dependent

variable, both trait anxiety and state anxiety were entered into the equation as independent variables. The results are reported on Table 3.

Table 3 - Summary of the Multiple Regression Results for Independent Variables Trait-State Anxiety and Dependent Variable AIDS-phobia.

<u>MULTIPLE REGRESSION</u>							
<u>EQUATION NUMBER 1</u>	<u>DEPENDENT VARIABLE</u>			<u>AIDS-PHOBIA SCALE</u>			
<u>Variables in the Equation</u>							
Independent Variables	B	SE. B.	BETA	Correlation	Partial	T.	Sig. T.
TRAIT	.238140	.105931	.151222	.215678	.129565	2.248	.0253*
STATE	.164348	.093236	.118572	.200777	.101921	1.763	.0790
(CONSTANT)	-18.942685	3.542803				-5.347	.0000

\*Significant at the 0.05 level

Although both state and trait anxiety initially were positively correlated with AIDS-phobia, the results of this test indicate a change. When the influence of state anxiety is removed, the correlation between trait anxiety and AIDS-phobia remained (Sig. T = 0.0253  $\leq$  0.05), however, when the influence of trait anxiety is removed, the

correlation between state anxiety and AIDS-phobia becomes insignificant (Sig.  $T = .0790 > 0.05$ ). Therefore, the Null Hypothesis was rejected in the first instance but retained in the second. It should be noted that the margin of significance or insignificance is very small; both the value of 0.0790 and the value of 0.0253 are in fact quite close to the established 0.05 level of significance. As the remaining independent variables in the succeeding hypotheses were brought into the Multiple Regression equation, these values for state-trait anxiety did change again.

#### Research Hypothesis H(R)3

There will be a relationship between death anxiety and AIDS-phobia when state-trait anxiety scores have been controlled for.

#### Null Hypothesis H( $\emptyset$ )3

There will not be a relationship between death anxiety and AIDS-phobia when state-trait anxiety scores have been controlled for.

All students participating were administered the Collett-Lester Death Anxiety Scale. This 36-item Scale consisted of 9 items related to death of self, 10 items related to death of others, 6 items related to dying of self, and 11 items related to dying of others. The range in total scores and means for each subscale are presented in Table 4, with a minus score representing a

lower level of death anxiety than a plus score. To test the hypothesis stepwise, Multiple Regression was run, using AIDS-phobia as the dependent variable. The death anxiety subscales and state-trait anxiety scores were entered into the equation as independent variables. The results are reported in Table 5. Dying of others and death of self appear to explain the greatest amount of variance, with correlations of .248991 and -.195041 respectively equalling approximately 10%. Both these subscales were significant at the 0.05 level when the influences of state and trait anxiety had been controlled for. The Null Hypothesis was therefore rejected in the case of Dying of Others and Death of Self, but retained for Dying of Self and Death of Others.

Table 4

SCORE RANGES and SCORE MEANS  
FOR THE COLLETT-LESTER DEATH ANXIETY SCALE

	SCORE RANGES	POSSIBLE SCORE RANGES	SCORE MEANS
DEATH OF SELF	-23.00 to +25.00	-27.00 to +27.00	1.036
DEATH OF OTHERS	-21.00 to +26.00	-30.00 to +30.00	3.518
DYING OF SELF	-17.00 to +14.00	-18.00 to +18.00	2.416
DYING OF OTHERS	-33.00 to + 3.00	-33.00 to +33.00	-16.196
TOTAL SCALE SCORE	-94.00 to +68.00	-108 to +108	- 2.307

Table 5 - Summary of Multiple Regression Results for Independent Variables: Dying of Others, State Anxiety, Death of Self, Death of Others, Dying of Self, Trait Anxiety and Dependent Variable AIDS-phobia.

MULTIPLE REGRESSION

EQUATION 1      DEPENDENT VARIABLE      AIDS-PHOBIA

Variables in the Equation

Independent Variables	B	SE. B.	BETA	Correlation	Partial	T.	Sig. T.
Dy. Othr.	.352494	.100036	.225265	.248991*	.201957	3.524	.0005*
STATE	.171693	.090604	.123871	.200777	.110220	1.895	.0591
Dth. Self	-.257097	.075659	-.223700	-.097274*	-.195041	-3.398	.0008*
Dth. Othr.	.068841	.094827	.046601	.058741	.042446	.726	.4684
Dy. Self	.054343	.137090	.025759	.067376	.023192	.396	.6921
TRAIT	.133425	.110822	.084727	.215678	.070282	1.204	.2296
CONSTANT	-9.712065	4.513012				-2.152	.0322

\*Significant at the 0.05 level

Research Hypothesis H(R) 4

A negative correlation will exist between the students' level of knowledge of how the AIDS virus is transmitted and their level of AIDS-phobia when state-trait anxiety and death anxiety scores have been controlled for.

Null Hypothesis H( $\emptyset$ ) 4

A negative correlation will not exist between the students' level of knowledge of how the AIDS virus is transmitted and their level of AIDS-phobia when state-trait anxiety and death anxiety scores have been controlled for.

Participating students were administered a 10-item knowledge of transmission scale developed by O'Donnell & associates. Three response categories were available for each item. Table 6 contains the percentage of the number of respondents who believe that AIDS can be transmitted in the various ways listed. As Table 6 reveals, 91.6% stated that AIDS could be transmitted by blood transfusion, and 86.5% felt that the disease could be transmitted through an accidental needle stick. Although only 21.6% felt the AIDS virus could be transmitted by emptying bedpans, 14.9% by giving CPR and 8.4% by kissing an AIDS patient, over 50% felt there was a possibility that the virus could be transmitted by these avenues.

To test the hypothesis, Multiple Regression was run using AIDS-phobia as the dependent variable, and student

Table 6 - Summary of the Percentage of the Respondents who believed AIDS could be transmitted in the following ways.

MODES OF TRANSMISSION			
Can AIDS be transmitted in the following ways:	YES %	POSSIBLY %	NO %
1. By blood transfusion	91.6	7.4	1.0
2. Being stuck with a needle from an AIDS patient	86.5	13.5	0.
3. Giving CPR	14.9	54.1	31.0
4. Kissing an individual with AIDS	8.4	55.4	36.2
5. Sharing eating utensils	5.1	34.0	60.9
6. Airborne transmission	2.7	6.7	90.9
7. Emptying bedpans	21.6	50.3	28.1
8. Changing bed linens	3.3	30.9	65.8
9. Shaking hands with an AIDS patient	1.0	2.7	96.3
10. Being in the same room with an AIDS patient	.3	2.0	97.7

level of knowledge, state-trait anxiety and death anxiety (using the four subscales) as independent variables. The results are reported in Table 7. Decreased knowledge appears to explain the greatest amount of variance with a

correlation of  $-.291045$  equalling approximately 8.5% (Sig. T =  $0.000 \leq 0.05$ ), even when the influence of state-trait anxiety and death anxiety have been controlled for. Thus, the Null Hypothesis was rejected.

Table 7 - Summary of Multiple Regression Results for Independent Variables Students' Knowledge, Death Anxiety Subscales, State-Trait Anxiety and Dependent Variable AIDS-phobia.

<u>MULTIPLS REGRESSION</u>							
<u>EQUATION 1</u>	<u>DEPENDENT VARIABLE</u>			<u>AIDS-PHOBIA</u>			
<u>Variables in the Equation</u>							
Independent Variables	B.	SE. B.	BETA	Corre- lation	Partial	T.	Sig. T.
Student Knowledge	-1.419311	0.265404	-0.283656	-.291045*	-.299135	-5.348	0.0000*
Fear of Dying of Others	0.387030	0.095838	0.247335	.248991	.230368	4.038	0.0001
State Anxiety	0.128231	0.086984	0.092515	.200777	.086098	1.474	0.1415
Fear of Death of Oneself	-0.239017	0.072397	-0.207968	-.097274	-.190010	-3.301	0.0011
Fear of Death of Others	0.011541	0.091272	0.007813	.058741	.007412	0.126	0.8995
Fear of Dying of Oneself	0.025199	0.131150	0.011944	.067376	.011263	0.192	0.8478
Trait Anxiety	0.142463	0.105942	0.090466	.215678	.078585	1.345	0.1798
CONSTANT	29.561845	8.517239				3.471	0.0006

\*Significant at the 0.05 level.

Research Hypotheses H(R)5a and H(R)5b

The demographic variables (sex, age, marital status, parent status, homophobic status, caring for an AIDS patient, and religion) will have an influence on the students' AIDS-phobia scores when anxiety level (state-trait anxiety scores and death anxiety scores) and AIDS knowledge have been controlled for.

Anxiety level (state-trait and death anxiety) and AIDS knowledge will have an influence on the students' AIDS-phobia scores when the demographic variables have been controlled for.

Null Hypotheses H( $\emptyset$ )5a and H( $\emptyset$ )5b

The demographic variables (sex, age, marital status, parent status, homophobic status, caring for an AIDS patient, and religion) will not have an influence on the students' AIDS-phobia scores when anxiety levels (state-trait anxiety scores and death anxiety scores) and AIDS knowledge have been controlled for.

Anxiety level (state-trait and death anxiety) and AIDS knowledge will not have an influence on the students' AIDS-phobia scores when the demographic variables have been controlled for.

All students participating were asked to provide information concerning the following demographic variables: sex, age, marital status, parent status, having cared for an AIDS patient, and religion. The results are summarized in Tables 8 and 9. For the hypotheses-testing phase, categories containing less than a 10% response were combined with the next most appropriate category, except in the case of religion which was ultimately divided into Catholic, Protestant and Others.

Table 8Age Distribution  
of Respondents

AGE	FREQUENCY
19 - 24	166
25 - 29	52
30 - 34	37
35 - 39	26
40 - 48	18
TOTAL	299

Table 9

Summary of  
Remaining Demographic Variables

	FREQUENCY	PERCENT
Male	19	6.4
Female	280	93.6
Common Law/Married	94	31.5
Single	183	61.2
Separated/Divorced	21	7.0
Widowed	1	.3
Children - Yes	79	26.4
- No	220	73.6
Catholic	88	29.5
Protestant	135	45.3
Jewish	2	.7
Atheist	6	2.0
Other	68	22.5
Ever Cared For an AIDS Patient - Yes	46	15.4
- No	253	84.6
Homosexual Aversion		
- None	162	54.4
- Some	116	38.6
- Substantial	21	7.0

Both hypotheses 5a and 5b were tested using Stepwise Multiple Regression. Each of the explanatory or independent variables were separately regressed on the outcome or dependent variable of AIDS-phobia. Sixteen independent variables were regressed in the following order: AIDS knowledge, dying of others, parent status, religion - Catholic, care given to AIDS patients, sex, state anxiety, aversion towards homosexuals, death of others, dying of self, marital status - married, religion - Protestant, death of self, trait anxiety, age, and marital status - single. Table 10 indicates the code used for each of the independent variables entered into the regression equation.

Table 10 - Coding of the  
Independent Variables

<u>Entered on</u>		
<u>Step Number</u>		
1.	KNOW	Student AIDS Knowledge Scale
2.	DYOTHR	Fear of Dying of Others
3.	CHILDREN	Do You Have Children
4.	CATHOLIC	Religion - Catholic
5.	PATIENT	Ever Cared for an AIDS Patient
6.	SEX	Gender of Respondent
7.	STATE	State Anxiety Scale
8.	AVERSION	Aversion (Dislike) Toward Homosexuals
9.	DYOTHR	Fear of Death of Others
10.	DYSELF	Fear of Dying of Oneself
11.	MARRIED	Marital Status - Married/Common Law
12.	PROTESTN	Religion - Protestant
13.	DTHSELF	Fear of Death of Oneself
14.	TRAIT	Trait Anxiety Scale
15.	AGE	Age of Respondent
16.	SINGLE	Marital Status - Single

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Table 11 - Summary of the Multiple Regression Results for Independent Variables State-Trait Anxiety, Death Anxiety, Knowledge and All Demographic Variables and Dependent Variable AIDS-phobia.

MULTIPLE REGRESSION

EQUATION 1

DEPENDENT VARIABLE

AIDS-PHOBIA

Variables in the Equation

Independent Variables	B	SE. B.	BETA	Correlation	Partial	T.	Sig. T.
1. KNOW	-.851961	.239961	-.170266	-.291074	-.207203	-3.550	.0005
2. DYOTHR	.332179	.084397	.212279	.248978	.228580	3.936	.0001
3. CHILD.	-1.-42277	1.760617	-.039288	.001024	-.035293	-.592	.5543
4. CATH.	.308205	1.494535	.011967	-.043411	.012301	.206	.8368
5. PATIENT	-1.590515	1.485778	-.049075	-.027377	-.063730	-1.070	.2853
6. SEX	-.127492	2.315760	-.002660	.045470	-.003284	-.055	.9561
7. STATE	.153020	.076245	.109970	.201293	.118876	2.007	.0457
8. AVERS.	9.350763	.907606	.498835	.560953	.523616	10.303	.0000
9. DTHOTHR	-.030508	.082171	-.020641	.058873	-.022143	-.371	.7107
10. DYSELF	-.039893	.114416	-.018853	.067342	-.020795	-.349	.7276
11. MARRIED	.897030	2.163113	.035598	-.084852	.024731	.415	.6787
12. PROTEST	.288224	1.332340	.012253	.066791	.012904	.216	.8289
13. DTHSELF	-.063903	.066898	-.055424	-.097832	-.056892	-.955	.3403
14. TRAIT	.088646	.093973	.055424	.215728	.056185	.943	.3463
15. AGE	.054846	.109664	.033037	-.042824	.029822	.500	.6174
16. SINGLE	3.813424	2.404298	.159033	.100252	.094197	1.586	.1138
(CONSTANT)	1.478499	11.804995	-21.758938			.125	.9004

Table 12 - Summary of the Significant Independent Variables following Step-Wise Multiple Regression

SUMMARY TABLE

Step	Independent Variable	Beta In	Correlation	% of Explained Variation by Each Independ. Variable	Cumulative % of Expl'd. Variation	Sig.T.
1.	AVERSION	.5610	.5610	31.47	31.47	.0001*
2.	DYOTHR	.2224	.2490	4.94	36.40	.000 *
3.	KNOW	-.1786	-.2911	3.02	39.42	.000 *
4.	STATE	.1441	.2013	1.95	41.37	.002 *
5.	SINGLE	.0892	.1003	0.78	42.16	.048 *

\*Significant at the 0.05 level.

As can be observed on Table 11 (Summary of the Multiple Regression Results for all the Independent Variables and AIDS-phobia) and Table 12 (Summary of the Significant Independent Variables Following Step-Wise Multiple Regression), several findings are noteworthy. Aversion towards homosexuals appears to explain the largest amount of the outcome variation with a correlation of .560953 equalling approximately 31.4% (Sig. T = .0000  $\leq$  0.05). Thus, this variable was selected as the first to

enter the regression equation. The remaining independent variables were then regressed on the outcome variable, jointly with the aversion. The independent variable which provided the next largest gain in explanatory power was dying of others, with a correlation of .248978 explaining an additional 4.94% of outcome variation. Dying of others was then added in as the second variable in the Multiple Regression equation. The remaining fourteen variables were then regressed to determine which one would provide the maximum possible explanatory power after controlling for the two variables previously selected. In this regression, AIDS knowledge proved to be most significant, with a correlation of  $-.291074$  explaining another 3.02%. The remaining thirteen variables were then regressed in a similar fashion while controlling for aversion, dying of others, and knowledge. In this instance, state anxiety appeared to account for the fourth largest amount in variation, with a correlation of  $.201293$ , an additional 1.95%. The remaining twelve variables were regressed again, while controlling for the previous four. With this regression, marital status - single explained the largest amount of outcome variation, with a correlation of  $.100252$ , a final 0.78%. The remaining eleven variables were regressed one more time to ensure that all significant variables had been identified. This was, in fact, the case, as none of

the remaining variables proved to be significant at the 0.05 level. Table 13 summarizes the final T. and Sig. T. values for the five significant variables and the eleven remaining independent variables.

Table 13 - Final Values for All Independent Variables With AIDS-phobia as Dependent Variable.

	T.	Sig. T
1. AVERSION	11.284	.0000 *
2. DYOTHR	4.168	.0000 *
3. KNOW	-3.584	.0004 *
4. STATE	2.910	.0039 *
5. SINGLE	1.987	.0479 *
6. AGE	.955	.3406
7. SEX	- .139	.8897
8. MARRIED	.484	.6285
9. CHILDREN	- .852	.3951
10. CATHOLIC	.096	.9236
11. PROTESTANT	.245	.8066
12. TRAIT	.797	.4260
13. DTHSELF	-1.251	.2119
14. DTHOTHR	- .891	.3734
15. DYSELF	- .809	.4191
16. PATIENT	-1.021	.3080
(CONSTANT)	- .066	.9475

\*Significant at the 0.05 level

With regard to the Null Hypotheses, the demographic variables of aversion and marital status - single did demonstrate significance at the 0.05 level, even when the influences of anxiety and knowledge were controlled for. The independent variables of parent status, religion, sex, having cared for an AIDS patient, marital status - married, and age, were however, not significant. Therefore, the Null Hypothesis was rejected in relation to aversion and marital status - single, but was retained in relation to the other variables. With regard to anxiety level and AIDS knowledge, state anxiety, dying of others and AIDS knowledge were significant even after the demographic variables had been controlled for. Trait anxiety, dying of self, death of others and death of self were not significant. The Null Hypothesis was therefore rejected in relation to state anxiety, dying of others and AIDS knowledge, but retained in relation to the other anxiety variables.

#### Summary

In summary, only five of the sixteen independent variables proved to be significant in relation to AIDS-phobia. Aversion towards homosexuals explained 31.47% of the variation in the outcome variable, followed by Dying of Others at 4.94%, knowledge of AIDS transmission at

3.02%, state anxiety at 1.95% and marital status - single at 0.78%. These results were supported to some degree in both the empirical and anecdotal information previously reviewed in Chapter II. A more comprehensive analysis of the implications of these findings will be discussed in Chapter V.

CHAPTER VDiscussionSummary

This study attempted to determine whether or not there was a correlation between state-trait anxiety, death anxiety, knowledge regarding how AIDS can be transmitted, and AIDS-phobia. In addition, this study also looked at the influence which demographic variables such as sex, age, marital status, parent status, homophobic status, caring for an AIDS patient, and religion, had on AIDS-phobia. Second year diploma nursing students in the Province of Manitoba constituted the population. All students were invited to participate on a voluntary basis. The conceptual framework for this study was based on the state-trait concept of anxiety developed by Charles Spielberger in 1964 (Spielberger, 1970). The questionnaire consisted of four parts: the Spielberger state-trait anxiety inventory, the Collett-Lester death anxiety scale, the O'Donnell AIDS-phobia index and AIDS transmission index. All questionnaires were administered to the students by the investigator during the months of March, April, May and June, 1988.

Much of the empirical research in AIDS has been

involved with the medical or scientific aspects of the syndrome. Psychological and/or behavioural studies have, for the most part, been neglected. This aspect of research, however, is vital to increasing understanding of this disease and providing optimum quality care to the AIDS patient. Before the educational needs of the care-giver can be addressed, it is essential that this psychological component be identified to ensure that the information being given is in fact what the care-giver needs to know in order to facilitate a reduction in anxiety, performance improvement and job satisfaction. Because of the psychological ramifications which AIDS can have on the care-giver, it would seem appropriate to investigate some of the psychological constructs in relation to AIDS. Second year diploma nursing students were chosen for this study as they will be the future care-givers in the province. The advantage of using second-year students was that they were nearing the end of their education and might have had exposure to the terminally ill and/or AIDS patient. These students had also received classes on AIDS and death and dying. Both the experience and the knowledge would enable them to respond to the questionnaire with an increased awareness of the potential difficulties inherent in caring for an AIDS patient, and

in turn, could provide useful information in terms of identifying in-service and/or curriculum deficiencies which might be addressed in the future.

The following research questions were investigated:

1. (a) Is there a relationship between trait anxiety and AIDS-phobia?
- (b) Is there a relationship between state anxiety and AIDS-phobia?
2. (a) Is there a relationship between trait-anxiety and AIDS-phobia when state anxiety scores have been controlled for?
- (b) Is there a relationship between state-anxiety and AIDS-phobia when state anxiety scores have been controlled for?
3. Is there a relationship between death anxiety and AIDS-phobia when state-trait anxiety has been controlled for?
4. Will a relationship exist between students' level of knowledge of how the AIDS virus is transmitted and their level of AIDS-phobia when state-trait anxiety and death anxiety have been controlled for?
5. (a) Will the demographic variables (sex, age, marital status, parent status, homophobic status, having cared for an AIDS patient, and religion) have an influence on the students' AIDS-phobia scores?
- (b) Will the demographic variables have an influence on the students' AIDS-phobia scores when anxiety level (state-trait anxiety scores and death anxiety scores) and AIDS knowledge are controlled for?
- (c) Will anxiety level (state-trait and death

anxiety) and AIDS knowledge have an influence on the students' AIDS-phobia scores when the demographic variables have been controlled for?

In reviewing the literature related to the psychological impact of caring for an AIDS patient, three sources of anxiety emerged as constructs which might affect the quality of care which the AIDS patient receives. They were:

1. Fear of Contagion

Although it appears evident from an epidemiological standpoint that the risk of HIV to the care-giver is very low, many care-givers remain fearful. Initially it was felt that this fear of contagion resulted primarily from a lack of knowledge. Unfortunately, increased cognitive awareness does not automatically reduce individual fear and anxiety. It is sometimes questioned whether enough is known about AIDS to say that contagion by proximity is impossible (Dunkel & Hatfield, 1986, p. 115). This lingering uncertainty can potentially interfere with the quality of care given to the AIDS patient.

2. Death Anxiety

Separate from the fear of contagion, but linked to it, is death anxiety - fear of the person who is dying, "as if death too might be transmissible" (Dunkel &

Hatfield, 1986, p. 115). Caring for the terminally ill patient forces the care-giver to confront his/her own feelings about death and dying. This process can evoke considerable drain and intense anxiety for the care-giver, resulting in avoidance of the dying AIDS patient altogether rather than dealing with the emotional conflicts encountered while providing care (Gerberding & Sande, 1987; Simmons-Alling, 1984).

### 3. Homophobia

It has been reported in much of the literature that the negative attitudes toward caring for AIDS patients was not directed at the disease itself but at sexual preference of the patient, in this instance, homosexuality (Furtenberg & Meltzer-Olsen, 1984; Nichols, 1984; Cassens, 1985; Selzer & Prince, 1985; Somerville, 1986; Steele, 1986; Hartnett, 1987; Wilson-Young, 1988; Van Servellen, Lewis & Leake, 1988). It is reported that 71% of AIDS victims are labelled as either "gay" or homosexual. With such negative feelings towards a group of people in need of care, one might wonder how prepared these health care workers would be to provide quality care to the victims of AIDS (Young, 1988).

Pearson's Product Moment Correlation Coefficient was

used to test hypothesis 1a and 1b with the remaining hypotheses being tested with the use of Multiple Regression. A total of 299 students participated in this study. All the data were analyzed by the University of Manitoba Research Corporation.

### Conclusions

#### State-Trait Anxiety and AIDS-phobia

Hypotheses 1a and 1b looked at the relationship between state-trait anxiety and AIDS-phobia. Initially, both state anxiety and trait anxiety were found to be significant in relation to AIDS-phobia, however, when the influence of each anxiety was controlled for in hypotheses 2a and 2b, it was discovered that only trait anxiety was significant. This was expected in the preliminary stage of evaluation. As Spielberger has pointed out, trait anxiety reflects anxiety proneness, that is, individual differences will influence the probability that anxiety states will be manifested in situations involving varying degrees of stress. Therefore, one's proneness to be anxious can be looked upon as a personality trait influencing the stress response. When this factor is taken into account, it becomes apparent that trait anxiety itself is not a product of one variable, but a combination of

numerous components which influence and develop the personality, some of which were identified as demographic variables. Thus, the demographic variables may have confounded the information gleaned from the analysis of the second hypotheses. Gehlback (1982, p. 196) states that "confounding occurs when factors that related to both the characteristic under scrutiny and the outcome appeared as competing explanations." In this instance, demographic factors such as marital status and aversion towards homosexuals may have been related to both state-trait anxiety and the outcome of AIDS-phobia. Consequently, the question must be asked: Are we seeing a significant correlation between trait anxiety and AIDS-phobia, or is a confounding factor exerting an undesirable influence? Because of the number of demographic variables present, the most efficient and practical method of controlling them was the application of step-wise Multiple Regression in Hypothesis 5b. In doing this, the results did change again, and it became evident that state anxiety, not trait anxiety, was significantly related to AIDS-phobia. This would appear to be a reasonable conclusion because of what state anxiety implies, and that is, if the individual perceives a situation as personally threatening (such as contact with an AIDS patient), irrespective of

the presence or absence of objective danger, then an emotional reaction will occur - in other words, an immediate increase in state anxiety (Spielberger, 1972).

#### Death Anxiety and AIDS-phobia

Hypothesis 3 looked at the relationship between death anxiety and AIDS-phobia when the influence of state-trait anxiety had been controlled for. Following the primary analysis, only two of the four subscales were found to be significant: Dying of Others and Death of Self. After the demographic variables were controlled for in Hypothesis 5b however, only Dying of Others remained significant. This may possibly be attributable to the influence which variables such as sex, age, religion, marital status and having cared for an AIDS patient, might have had on the students' fear of death of self. Once the influence of these variables was removed, the relationship between death of self and AIDS-phobia was weakened (Sig.  $T = .0008$  before; Sig.  $T = .3404$  after). Conversely, the relationship between Dying of Others and AIDS-phobia was strengthened (Sig.  $T = .0005$  before; Sig.  $T = .0001$  after). The literature on AIDS is replete with mortality statistics. All AIDS patients eventually die, and for many this process of dying is an agonizing one, both mentally and physically. So too for

the care-giver. This aspect of death anxiety in relation to AIDS anxiety is well documented (Simmons-Alling, 1984; Rubinow, 1986; Wachter, 1986; Frezrer, 1986; Gerberding & Sande, 1987). While Death of Self may continue to be a concern for those who perceive themselves at risk in giving care or because of a chosen lifestyle, the anxiety which exists from actually caring for invariably young and previously healthy individuals who are now dying very quickly, is sometimes overwhelming. The care-giver is seemingly powerless to alter this eventual outcome, thus his/her involvement can extract quite a substantial emotional toll (Wachter, 1986).

#### Knowledge of AIDS transmission and AIDS-phobia

Hypothesis 4 looked at the relationship between the students' level of knowledge of how the AIDS virus is transmitted and their level of AIDS-phobia when the influences of state-trait anxiety and death anxiety had been eliminated. The results indicated that the students' knowledge was, in fact, negatively correlated to AIDS-phobia. That is to say, students with a decreased knowledge of virus transmission did have a higher level of AIDS-phobia. The primary reason for this relationship is most probably attributable to a fear of contagion.

Although all the schools surveyed had provided their students with approximately the same amount of classroom instruction concerning AIDS transmission, precautions involved in caring for an AIDS patient and infection control, there still appeared to be a lingering uncertainty about AIDS transmission. This could be a result of the student being absent from class, or receiving misinformation through the media and/or poor scientific sources. Gerberding and Sande (1987) stated that fears of contagion were often promoted by media reports implying that the AIDS virus is readily transmissible by casual contact. The distinction between isolating the virus from a body fluid and transmission from exposure to an infected body fluid often is not given adequate emphasis (Gerberding & Sande, 1987, p. 11). This doubt was abundantly evident in the responses given by students regarding modes of transmission. The majority knew that the virus could be transmitted from an AIDS infected needle, however, over 50% were not sure whether the virus could be spread by giving C.P.R., kissing an AIDS patient, or emptying a bedpan, and over 30% thought there was a possibility of transmission through sharing eating utensils or even changing bed linens.

Another element which may have contributed to the

students' uncertainty is the fact that only 15.4% of those surveyed had cared for an AIDS patient. This may have indirectly influenced their motivation to become more knowledgeable about the disease. Amchin and Polon (1986) suggested that misinformation and/or inadequate knowledge combined with the care-giver's lack of prior experience in caring for an AIDS patient, seemed to invite speculation about the dangers of treating those patients, and caused care-givers to be uncertain about treatment decisions and what precautions were appropriate and necessary. Hartnett (1987) supported this and stated that although the policies and procedures from an infection-control standpoint were sufficient, ignorance and lack of experience with AIDS patients tended to undermine or interfere with common sense. This, in turn, could precipitate increased levels of anxiety, however, when care-givers did take the opportunity to increase their knowledge about AIDS and gain experience in caring for AIDS patients, their initial anxiety and stress were reduced.

#### The Demographic Variables in Relation to AIDS-phobia

Hypothesis 5a looked at the influence which demographic variables had on the students' level of AIDS-phobia when the effect of state-trait anxiety, death

anxiety and AIDS knowledge had been controlled for. Upon analysis of the data after all the variables had been entered into the equation, it was discovered that only two of the seven demographic variables emerged as significant. The first, aversion towards homosexuals, proved to be the most important in terms of explaining an increased level of AIDS-phobia. This was not surprising and really just confirmed what had been stated repeatedly in the literature, that is, that much of the negativity towards AIDS was not directed at the disease of the patient, but at the sexual orientation of the individual (Furstenberg & Meltzer-Olsen, 1984; Batchelor, 1984; Nichols, 1984; Cassens, 1985; Selzer & Prince, 1985; Douglas, Kalman & Kalman, 1985; Somerville, 1986; Petrie, 1986; Steele, 1986; Van Servellen, Lewis & Leake, 1988; Young, 1988). Schoenberg, Geldberg and Shore (1984, p. 66) postulate that a principal explanation for this is that, "Health-care providers - just as all other people - are products of a culture and socialization process which are homophobic." Van Servellen, Lewis and Leake (1988) have summarized some of the reasons for this discrimination and fear related to homosexuals:

1. Historically homosexuals have been stigmatized because they have not conformed to what society perceives to be normal sexual behaviour.

2. From a religious standpoint, homosexual behaviour has been deemed immoral by many churches.
3. In the United States, criminal laws prohibiting homosexual behaviour remain in existence in 24 states.
4. Up until 1973, homosexuality was diagnosed as an emotional illness by the American Psychiatric Association.
5. Because AIDS is perceived as a venereal disease, individuals with AIDS, 71% being homosexual, are looked upon as sexually promiscuous and morally corrupt.

Namir ( 1986) further states that because of the individual's homosexuality, the AIDS patient is sometimes not considered worthy of care and thus is deprived of the empathy and concern usually bestowed upon those with terminal illnesses. Homophobia often results in blaming the individual for his/her illness; homosexual behaviour is wrong and now they are paying for it. This process of victim-blaming serves to protect the care-giver from the fear that he/she might be at risk of contracting the disease.

The second variable which was assessed as significant in relation to an increased level of AIDS-phobia, is marital status - single. This proved to explain the least amount of significant variation - only 0.78%. The only rationale for why being single could have an influence

on one's level of AIDS-phobia is probably related to the issue of sexual promiscuity. In the majority of AIDS cases, the virus appears to have been transmitted in one or more of the following ways: sexual contact, intravenous drug administration with contaminated needles, and administration of blood and blood products (Curran and associates, 1985). The two body fluids which pose the greatest risk for transmission of the AIDS virus appear to be blood and semen. Since there are no data available to associate being single with requiring blood transfusion or being an intravenous drug abuser, the only other high-risk group consists of individuals who have had multiple sexual partners. If this is the case, then one has to assume that the probability of a single individual having more than one sexual partner is greater than that of a married individual, therefore placing the single person at greater risk for contracting AIDS and perhaps increasing his or her level of AIDS-phobia.

#### Comparison With Other Studies

The findings of this study with regard to the strong correlation which existed between AIDS-phobia and having an aversion towards homosexuality, was supported in three other empirical studies which investigated this relationship: O'Donnell and associates, 1987; Douglas, Kalman &

Kalman, 1985; and Morton and McManus, 1986. Although these studies did not suggest a causal relationship, it was felt that the heightened anxiety towards the AIDS patient was augmented by negative attitudes towards homosexuality.

None of the previous studies looked at marital status of the care-giver in relation to AIDS-phobia, or even controlled for it in the investigation of other variables, therefore this was a new finding. Prior studies have not looked at death anxiety and state-trait anxiety specifically with respect to AIDS-phobia. O'Donnell and associates (1987) did, however, look at AIDS-stress and AIDS-phobia and did find the correlation to be significant. Horstman and McKusick (1986) also looked at stress in addition to fear of death and anxiety experienced by physicians who had cared for AIDS patients. Although increased stress was reported by the majority of subjects, anxiety and fear of death appeared to be more significant in homosexual physicians. Horstman and McKusick did not separate out the four aspects of death anxiety, but they seemed to suggest that perhaps dying of self and death of self would be of greater consequence because of the homosexual's perceived increased risk for contracting AIDS. In terms of this present study, subjects were not required

to indicate their sexual orientation, making it impossible to determine whether or not the correlations between AIDS-phobia, dying of others and state anxiety were more significant in those identified as homosexual.

The significance between AIDS-knowledge and AIDS-phobia was supported to some degree in one previous study. When O'Donnell and associates (1986) initially looked at the relationship between AIDS knowledge and AIDS-phobia, they did not find a correlation to exist, however, in a subsequent study, 52% of the same health care workers were surveyed following in-service education programs in which information was presented on the biology and epidemiology of AIDS, its clinical course and treatment and infection control. The results of this survey indicated that an increase in knowledge was associated with reduced stress, perceived risk and negative attitudes toward the AIDS patient (O'Donnell and associates, 1987).

Five other studies investigated the relationship between AIDS knowledge and negativity towards AIDS patients. Of these, two studies reported that decreased knowledge was associated with decreased anxiety (Rosse, 1985; Price, Desmond & Kukulka, 1985). One study reported that in spite of a sound knowledge base

concerning AIDS, the care-givers were reluctant to care for AIDS patients and would choose not to given the choice (Gerbert, 1987). Two studies did not find any correlation between AIDS knowledge and a negative attitude or AIDS-phobia (Morton & McManus, 1986; Blumenfield and associates, 1987). All of these results were inconsistent with the information obtained from the present study, that a decrease in AIDS knowledge produced an increase in AIDS-phobia.

#### Limitations

A number of the hindrances involved in this study were chiefly a result of pragmatic and ethical considerations related to the study of AIDS-phobia. Firstly, the evaluation procedure itself may have imposed restrictions. Although the use of a paper and pencil and close-ended questionnaires provided for uniformity of responses and easy processing, because of the character of this subject, students may have preferred a less restrictive medium for communicating their views. A second problem arose when contemplating the subject selection. Because of the nature of this study, it was mandatory from an ethical standpoint that participation be strictly voluntary. This issue of volunteerism is sometimes in conflict with a number of scientific concerns, particularly the

generalizability of the results. This becomes threatened if any doubt is cast upon the degree to which the volunteers are representative of the general population. If the volunteers reflect a specific personality trait, then the survey findings cannot be generalized to an entire population which would include "the willing respondents and the somewhat unwilling" (Babbie, 1979, p. 60; Shady, 1977). In the case of this study, the population being investigated was comprised exclusively of students. Sometimes this creates a slightly different problem in that the student may fear that his or her non-participation will be perceived negatively by the teacher. It is difficult to determine whether this was a factor, as the majority of students who were in attendance at the time of the survey did agree to participate. A more significant handicap proved to be the increase in percentage of absenteeism as the academic year drew to a close.

A third concern involved those variables which are uncontrollable, such as the students' exposure to media coverage of AIDS. During the course of this study, there was a plethora of publications available in both scientific and non-scientific journals, dealing with the subject of AIDS, thus the accuracy of the information being conveyed was suspect. AIDS has also been given abundant

television coverage in the form of news, documentary and fictional movies and serials, and again, the accuracy of this information has been, at best, inconsistent. It would be impossible to control the information students might be exposed to outside of school, without subjecting the results to additional bias. Another aspect of this involves the contact students may have had with death and dying, victims of AIDS and high-risk groups (homosexuals, intravenous drug abusers, hemophiliacs) on a non-professional or personal level. These factors were not controlled for in the questionnaire and may have influenced responses.

A final consideration involves the reliability of the AIDS-phobia and AIDS knowledge segment of the questionnaire itself. These items had only been tested on hospital workers in a major AIDS patient care facility in Massachusetts, and while the reliability statistics for this present target population were acceptable, the instrument and resulting data should perhaps be viewed as exploratory.

### Recommendations

Despite the vast amounts of literature on AIDS and the care of the AIDS patient, this study certainly

suggests that at an undergraduate level, the nurses' knowledge remains inadequate and inaccurate. This could have a profound effect on how they perceive the AIDS patient and the quality of care the AIDS patient receives. Previous studies have indicated that this knowledge gap is not confined to the student. Similar findings have been reported in surveying both graduate nurses and physicians (Mock, 1986; Van Servellen, Lewis & Leake, 1988; Lewis and associates, 1987; Flaskerud, 1988).

"Education to promote understanding is an important component of crisis intervention" (Hartnett, 1987). Information concentrated on factual data about AIDS is still essential for both the graduate and undergraduate nurse and/or health professional. Epidemiological and scientific information is needed as well as information regarding the psycho-social and physical problems of the disease itself. Fundamental to this is a working knowledge of how the disease is transmitted. Students particularly need to have a realistic appraisal of the risk of exposure to the AIDS virus and what precautions need to be observed. Knowing the facts about risk and perhaps the incidents of seroconversion in health professionals, will, it is hoped, reassure the students and motivate them to follow proper procedure when caring for the AIDS

patient (Wiley, Heath & Acklin, 1988; Van Servellen, Lewis & Leake, 1988).

Unfortunately, AIDS education cannot be limited to factual information. Although facts can supersede attitudes, fears and anxieties in some circumstances, more often the anxiety and fear surrounding the negativity towards AIDS prevails and this warrants serious attention (Van Servellen, Lewis & Leake, 1988). This is particularly true when considering the homosexual AIDS patient. Aversion towards homosexuals and AIDS-phobia proved to be the most significant variable of all those tested. This presents a rather remarkable implication for AIDS education. Effective AIDS education cannot take place without assessing the emotional impact on the care-giver. "A negative emotional impact most likely would result in rejection of learning or its application" (Young, 1988, p. 9). When the AIDS patient is perceived as a personal threat to one's sexual identity, it presents a tremendous barrier in terms of the individual's receptiveness to new information requiring him or her to alter a former belief or attitude. In addressing the negative attitudes or feelings care-givers may have towards homosexuals, Young suggests that the following areas be considered: "(1) personal recognition of one's own feelings; (2) voluntary

sharing of these feelings with others; (3) understanding why one feels a certain way; (4) assuming responsibility for one's own feelings, and (5) understanding the risks certain feelings carry for one's own professional as well as personal life" (Young, 1988, p. 10). When the consequences of the negativity towards homosexuals are talked about, often the care-givers' desire to change can be initiated, particularly if the environment is a supportive one and they receive the reassurance from an existing support system that their change in attitude will be shared and confirmed by others. The assumption should never be made that because certain information is pertinent to the learner's profession, the individual will learn, absorb and implement what has been taught.

Much of the above information can be applied when dealing with death anxiety, another significant variable strongly connected with AIDS-phobia. Although death and dying is a topic formally discussed in all the nursing programs, many student and graduate nurses never really examine their own thoughts on the subject until they are confronted with a dying individual - either professionally or personally. Having to come to terms with death and dying under these circumstances can impose an immeasurable amount of stress and anxiety on a care-giver.

Perhaps the types of death education presented in the various nursing curricula needs to be reassessed and/or supplemented in terms of the AIDS patient, to assure that these future care-givers are adequately prepared to approach the professional challenges they may be faced with.

The single status of the majority of the student nurses surveyed must also be considered when developing an AIDS education program. In addition to the information given regarding the care of an AIDS patient who is terminal and maybe homosexual, students may also need information as to how they can decrease their own risk of contagion at a personal level. This aspect of AIDS education needs to define and promote a lifestyle that will facilitate good health (Osborn, 1986). Educational efforts should contain explicit, practical and perhaps graphic advice specific to the target audience about safe sexual practices and how to avoid the dangers of shared needles and syringes (Institute of Medicine, National Academy of Sciences, 1988).

Finally, the issue of state anxiety would appear to underlie all the previous variables correlated with AIDS-phobia. Before anxiety can be reduced or managed, the

stimulus for anxiety must be identified whether it be inadequate knowledge causing a fear of contagion, aversion toward homosexuals, fear of death and dying, or anxiety over lifestyle. What is salient to the success of any program, is defining what the target audience needs to know and then determining their readiness to learn. This is a prerequisite to education taking place. As stated previously, AIDS education can never be just an assimilation of facts. Because of the multi-dimensional aspects of the disease, the educational process will often involve not just new learning, but unlearning and re-learning, and for many it will mean changing existing attitudes, beliefs and behaviour. This presents an arduous challenge for any educator when trying to develop a program that will successfully address the areas of concern for those faced with the responsibility of caring for individuals with AIDS.

#### Research Recommendations

As previously stated, AIDS research for the most part has been concerned with the scientific and medical aspects of the disease. Larson (1988) reported that in reviewing the nursing literature over a 52-month period, the majority of articles related to care of the AIDS patient and public policy issues, but none reported actual research studies. It would seem that there is a need for research

to be conducted by nurses and/or other non-medical health care professionals, and that this research address some of the social and psychological problems associated with this disease.

Social science research can play a critical role in facing the AIDS challenge. The Institute of Medicine, National Academy of Sciences (1986) states that in the past there has been considerable research which investigated the areas of behavioural change, risk perception, attitudes towards civil liberties, tolerance and discrimination, communication and the organization of health care. Studies in these areas need to be developed specific to the AIDS epidemic. From an epidemiological standpoint, education is an integral component of any attempt to decrease or limit the spread of the AIDS virus, however, prior to this it is essential that needs assessments are conducted to ascertain what the target population wants to know or does not know. In this way, information can be presented at an appropriate level. Because behavioural change programs have dubious success, AIDS education will require the development of innovative methods, followed by an evaluation of their efficacy in effecting the desired change.

The problem of discrimination needs to be investigated, particularly the area of homophobia. Aversion towards homosexuals was the most significant variable identified in this study. This suggests a need for a more comprehensive investigation of this subject in relation to AIDS, at both the graduate and undergraduate levels.

Studies are needed to look at the special problems of caring for a dying patient with AIDS, to determine whether or not AIDS patients are perceived as deserving of the same quality of care as other terminal patients.

Further research in the area of AIDS-phobia would be helpful, particularly with respect to instrumentation. More comprehensive tools are needed to thoroughly assess this problem, and studies need to be replicated to achieve adequate levels of validity and reliability.

Finally, any research which will enhance the knowledge and understanding of the health care provider and facilitate his or her ability to provide care to the AIDS patient effectively, humanely and compassionately, will be research worth doing.

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List of Appendices

- "A" Student Questionnaire
- "B" Letter to Directors of the Schools of Nursing
- "C" Student Consent Form

STUDENT INSTRUCTIONS

The purpose of this survey is to determine what the current student knowledge and anxiety status is in relation to AIDS and/or caring for AIDS patients.

Your anonymity in completing this questionnaire will be assured. Please do not identify yourself in any way. The questionnaire should take approximately 20 minutes to complete. Upon completion, insert the questionnaire in the envelope provided, seal it and return the envelope to the investigator.

Background Information

DIRECTIONS: Answer each question by placing the appropriate number in the box to the right. Please answer all questions.

- |    |  |   |                          |
|----|--|---|--------------------------|
| 1. | What is your age?                                      |   | <input type="text"/>     |
| 2. | What is your sex?                                      | Male = 1<br>Female = 2  | <input type="checkbox"/> |
| 3. | What is your marital status?                           | Common Law/Married = 1<br>Single = 2<br>Separated/Divorced = 3<br>Widowed = 4 | <input type="checkbox"/> |
| 4. | Do you have children?                                  | Yes = 1<br>No = 2   | <input type="checkbox"/> |
| 5. | What is your religion?                                 | Catholic = 1<br>Protestant = 2<br>Jewish = 3<br>Atheist = 4<br>Other = 5      | <input type="checkbox"/> |
| 6. | Do you have any aversion (dislike) toward homosexuals? | None = 1<br>Some = 2<br>Substantial = 3                                       | <input type="checkbox"/> |
| 7. | Have you cared for an AIDS patient?                    | Yes = 1<br>No = 2   | <input type="checkbox"/> |

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## PART B

2.

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then blacken-in the appropriate bracket to the right of the statement to indicate how you feel right now, that is, at this moment. There are no right or wrong answers. Do not spend too much time on any one statement, but give the answer which seems to describe your present feelings best. Please answer every item.

		Not at all	Somewhat	Moderately So	Very Much So
1.	I feel calm . . . . .	(1)	(2)	(3)	(4)
2.	I feel secure . . . . .	(1)	(2)	(3)	(4)
3.	I am tense . . . . .	(1)	(2)	(3)	(4)
4.	I am regretful . . . . .	(1)	(2)	(3)	(4)
5.	I feel at ease . . . . .	(1)	(2)	(3)	(4)
6.	I feel upset . . . . .	(1)	(2)	(3)	(4)
7.	I am presently worrying over possible misfortunes . . . . .	(1)	(2)	(3)	(4)
8.	I feel rested . . . . .	(1)	(2)	(3)	(4)
9.	I feel anxious . . . . .	(1)	(2)	(3)	(4)
10.	I feel comfortable . . . . .	(1)	(2)	(3)	(4)
11.	I feel self-confident . . . . .	(1)	(2)	(3)	(4)
12.	I feel nervous . . . . .	(1)	(2)	(3)	(4)
13.	I am jittery . . . . .	(1)	(2)	(3)	(4)
14.	I feel "high strung" . . . . .	(1)	(2)	(3)	(4)
15.	I am relaxed . . . . .	(1)	(2)	(3)	(4)
16.	I feel content . . . . .	(1)	(2)	(3)	(4)
17.	I am worried . . . . .	(1)	(2)	(3)	(4)
18.	I feel over-excited and "rattled" . . . . .	(1)	(2)	(3)	(4)
19.	I feel joyful . . . . .	(1)	(2)	(3)	(4)
20.	I feel pleasant . . . . .	(1)	(2)	(3)	(4)

3.

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then blacken-in the appropriate bracket to the right of the statement to indicate how you generally feel. There are no right or wrong answers. Do not spend too much time on any one statement, but give the answer which seems to describe how you generally feel. Please answer every item.

	Almost Never	Sometimes	Often	Almost Always
21. I feel pleasant . . . . .	(1)	(2)	(3)	(4)
22. I tire quickly . . . . .	(1)	(2)	(3)	(4)
23. I feel like crying . . . . .	(1)	(2)	(3)	(4)
24. I wish I could be as happy as others seem to be . . . . .	(1)	(2)	(3)	(4)
25. I am losing out on things because I can't make up my mind soon enough . . . . .	(1)	(2)	(3)	(4)
26. I feel rested . . . . .	(1)	(2)	(3)	(4)
27. I am "calm, cool and collected" . . . . .	(1)	(2)	(3)	(4)
28. I feel that difficulties are piling up so that I cannot overcome them . . . . .	(1)	(2)	(3)	(4)
29. I worry too much over something that really doesn't matter . . . . .	(1)	(2)	(3)	(4)
30. I am happy . . . . .	(1)	(2)	(3)	(4)
31. I am inclined to take things hard . . . . .	(1)	(2)	(3)	(4)
32. I lack self-confidence . . . . .	(1)	(2)	(3)	(4)
33. I feel secure . . . . .	(1)	(2)	(3)	(4)
34. I try to avoid facing a crisis or difficulty . . . . .	(1)	(2)	(3)	(4)
35. I feel blue . . . . .	(1)	(2)	(3)	(4)
36. I am content . . . . .	(1)	(2)	(3)	(4)
37. Some unimportant thought runs through my mind and bothers me . . . . .	(1)	(2)	(3)	(4)
38. I take disappointments so keenly that I can't put them out of my mind . . . . .	(1)	(2)	(3)	(4)
39. I am a steady person . . . . .	(1)	(2)	(3)	(4)
40. I get in a state of tension or turmoil as I think over my recent concerns and interests . . . . .	(1)	(2)	(3)	(4)

PART C

4.

DIRECTIONS: Here is a series of general statements concerning death and dying. Read each statement and decide quickly how you feel about it, then blacken-in the appropriate bracket to the right of the statement to indicate your agreement or disagreement. Please put down your first impression. Please answer every item.

	Strongly Agree	Moderately Agree	Slightly Agree	Slightly Disagree	Moderately Disagree	Strongly Disagree
1. I would avoid death at all costs . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
2. I would experience a great loss if someone close to me died . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
3. I would not feel anxious in the presence of someone I knew was dying . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
4. The total isolation of death frightens me . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
5. I am disturbed by the physical degeneration involved in slow death . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
6. I would not mind dying young . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
7. I accept the death of others as the end of their life on earth . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
8. I would not mind visiting a senile friend . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
9. I would easily adjust after the death of someone close to me . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
10. If I had a choice as to whether or not a friend should be informed he/she is dying, I would tell him/her . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
11. I would avoid a friend who was dying . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
12. Dying might be an interesting experience . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
13. I would like to be able to communicate with the spirit of a friend who has died . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
14. I view death as a release from earthly suffering . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
15. The pain involved in dying frightens me . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
16. I would want to know if a friend were dying . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)

(continue on next page)

5.

	Strongly Agree	Moderately Agree	Slightly Agree	Slightly Disagree	Moderately Disagree	Strongly Disagree
17. I am disturbed by the shortness of life . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
18. I would not mind having to identify the corpse of someone I know . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
19. I would never get over the death of someone close to me . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
20. The feeling that I might be missing out on so much after I die bothers me . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
21. I do not think of dead people as having an existence of some kind . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
22. I would feel uneasy if someone talked to me about the approaching death of a common friend .	(3)	(2)	(1)	(-1)	(-2)	(-3)
23. Not knowing what it feels like to be dead does not bother me . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
24. If I had a fatal disease, I would like to be told . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
25. I would visit a friend on his/her deathbed . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
26. The idea of never thinking or experiencing again after I die does not bother me . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
27. If someone close to me died I would miss him/her very much . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
28. I am not disturbed by death being the end of life as I know it . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
29. I would feel anxious if someone who was dying talked to me about it . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
30. The intellectual degeneration of old age disturbs me . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
31. If a friend were dying I would not want to be told . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
32. I could not accept the finality of the death of a friend . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)

(continue on next page)

	Strongly Agree	Moderately Agree	Slightly Agree	Slightly Disagree	Moderately Disagree	Strongly Disagree
33. It would upset me to have to see someone who was dead . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
34. If I knew a friend were dying, I would not know what to say to him/her . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
35. I would not like to see the physical degeneration of a friend who was dying . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
36. I am disturbed by the thought that my abilities will be limited while I lie dying . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)

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PART D

7.

DIRECTIONS: Here is a series of general statements concerning AIDS and AIDS transmission. Read each statement and decide how you feel about it, then blacken-in the appropriate bracket to the right of the statement to indicate your agreement or disagreement. Please put down your first impression. Please answer every item.

	Strongly Agree	Moderately Agree	Slightly Agree	Slightly Disagree	Moderately Disagree	Strongly Disagree
1. A hospital worker should not be required to work with AIDS patients . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
2. AIDS patients have as much right to quality medical care as anyone else . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
3. AIDS will make my job a high-risk occupation . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
4. AIDS is God's punishment for immorality . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
5. Dealing with AIDS patients will be different from dealing with other types of patients . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
6. The high cost of treating AIDS patients is unfair to other people in need of care . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
7. AIDS patients offend me morally . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
8. If I learned that someone I know had AIDS, it would be hard for me to continue my relationship with him/her . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
9. Having a co-worker with AIDS will not bother me . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
10. If I got AIDS, I would worry that other people would think I was a homosexual . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
11. Working with AIDS patients could be a rewarding experience . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)
12. It is important to go out of your way to be helpful to a patient with AIDS . . . . .	(3)	(2)	(1)	(-1)	(-2)	(-3)

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8.

	Yes	No	Don't Know
13. Do you think that people with AIDS should be allowed to work in public schools? . . . . .	(1)	(2)	(3)
14. Do you think that people with AIDS should be allowed to handle food in restaurants? . . . . .	(1)	(2)	(3)
15. Do you think that people with AIDS should be allowed to work with patients in hospitals? . . . . .	(1)	(2)	(3)
	More Tolerant	No Change	Less Tolerant
16. Has the growing number of AIDS cases made you more tolerant, less tolerant or not changed your attitude at all about homosexuality?	(1)	(2)	(3)

(Go on to next page)

9.

Can AIDS be transmitted in the following ways?

	Yes	Possibly	No
1. By blood transfusion . . . . .	(1)	(2)	(3)
2. By being stuck with a needle from an AIDS patient . . . . .	(1)	(2)	(3)
3. By giving C.P.R. . . . .	(1)	(2)	(3)
4. By kissing an individual with AIDS . . . . .	(1)	(2)	(3)
5. By sharing eating utensils . . . . .	(1)	(2)	(3)
6. By airborne transmission . . . . .	(1)	(2)	(3)
7. By emptying bedpans . . . . .	(1)	(2)	(3)
8. By changing bed linens . . . . .	(1)	(2)	(3)
9. By shaking hands with an AIDS patient . . . . .	(1)	(2)	(3)
10. By being in the same room with an AIDS patient . . . . .	(1)	(2)	(3)

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THANK YOU FOR YOUR PARTICIPATION IN THIS SURVEY.

March 10, 1988.

Dear :

I am a graduate nurse from the University of Manitoba and have been teaching at the Health Sciences Centre School of Nursing since 1976. At present, I am completing my thesis for a Master's degree in the Faculty of Education. The subject of study I have chosen is "The Psychological Impact of AIDS on the Health Care Professional".

Since the discovery of the AIDS virus in 1981, there has been considerable confusion and concern regarding the disease. Its impact has affected not only the patients, but also the health-care professionals responsible for their management.

Although AIDS has been the focus of much attention within the scientific community in an attempt to inform the health-care worker and facilitate safe, optimal care, the fear and anxiety associated with this disease remain a constant source of stress.

In spite of the research and study to date, much more remains to be done. Thus far, the majority of the empirical studies have investigated the epidemiological and virilological aspects, however, the psychosocial components have, for the most part, been ignored. It is for that reason that I would like to investigate this area as it relates to second year diploma nursing students in the Province of Manitoba. The purpose of this letter is to request permission to survey second year students in your nursing school.

The questionnaire to be used should be finalized and approved by the University of Manitoba Ethical Review Board by April 1, 1988. It consists of basic demographic data, a state-trait anxiety inventory developed by Spielberger & Associates, the Collett-Lester Death Anxiety Scale, and an AIDS-phobia-AIDS-transmission scale developed by O'Donnell and Associates. All instruments have been internally and externally validated. If possible, I would like to meet with students immediately following a class -- perhaps the last class before lunch, or following the last class of the day. I will personally conduct the survey, which will take approximately twenty minutes to complete.

Students are encouraged to participate on a voluntary basis and anonymity will be ensured. A consent form will be provided for students to sign as a means of ensuring their voluntary participation and confidentiality. The results of the survey will be made available upon request. Five research hypotheses will be tested. These are set out on the attached sheet for your information.

2.

March 10, 1988.

Your participation in this study is essential and will be very much appreciated. I will be contacting you after March 20, 1988, to answer any questions which you might have, and to discuss a possible date for implementation of the survey.

Thank you for your consideration and your time.

Yours truly,

Deborah Bembem, B.N.

DB:lr  
Enc.

APPENDIX "C"STUDENT CONSENT

I hereby agree to participate in the survey entitled "Caring for the AIDS Patient, a Study of the Psychological Impact on Second Year Diploma Nursing Students in Manitoba."

It is my understanding that if I participate, my anonymity will be assured.

---

Student's signature

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Date