INTRODUCTION
The second half of the 20th century has, to date, been marked by unprecedented growth in scientific knowledge and technological achievements. Nowhere are these developments more evident than in the field of human health. During the past thirty years phenomenal progress has been made in eliminating or successfully treating conditions which, in previous years were fatal or permanently disabling. In the western world, epidemics of poliomyelitis, measles, pertussis, small pox, diphtheria and typhoid fever no longer threaten human health and well-being. Mechanical devices and new technologies offer relief from kidney disease, cancer, bone degeneration and cardiovascular disorders. More remarkable are the options for removing complete body organs and replacing them with structures taken from human donors.

In the midst of this progress however, new and devastating health problems are emerging. The existence of Auto-Immune Disease Syndrome, AIDS - a terminal condition - is spreading at an alarming rate. Substance abuse, mental illness and suicide are decimating the ranks of teenagers and young adults. Complicating the situation are the skyrocketing costs of health care and the lack of financial resources to meet the demands. Hospitals, that build their budgets on projected income from private funds plus state and federal subsidies are experiencing difficulty in meeting operating costs. In Massachusetts, an ambitious plan for
providing health care for the total population has hit major road blocks. Because of a state-level deficit, the staggering sum of $214 million, promised as a supplement to hospital resources, has been withdrawn, (Eubanks:1989). As a means of adjusting to the short-fall, some institutions have initiated extensive cutbacks in services rendered and in auxiliary staffing. On a national level, there is a scarcity of institutions, funds, modalities and personnel needed to meet the challenges of the emerging health care needs. A most critical factor in the total situation is the shortage of nurses, educated and available to provide essential service.

THE NURSING SHORTAGE

Nurses, numbering in the neighborhood of one and one-half million, make up the largest category of workers in the health care field. Unfortunately for the American public, the current and potential supply of nurses is falling markedly behind the expanding demand for their services. The seriousness of the nursing shortage is reflected in numerous publications and reports. Magner, writing in The Chronicle of Higher Education states: "The nursing shortage varies in severity from city to city, but is a nationwide problem . . . On average, about 15 percent of the nursing positions budgeted by hospitals are now vacant", (1989:35). In a news article focused on health care careers it was recorded that approximately one nursing position in eleven is now unfilled, (Saltzman, 1989). As far back as June, 1987, a Newsweek staff report on nursing presented some sobering information:

Detroit-area hospitals have 1,200 posts empty, Dallas-Ft. Worth has 900 vacancies. . . The staffing shortages have severely stretched the quality of care at some hospitals--further adding to the burnout and high turnover. . . Quoting one staff nurse who preferred to remain anonymous, "When I got home after a night in the heart ICU, I was becoming physically ill. My heart would
pound. My social life was nil. I would crawl into bed and not answer the phone," (Clark et. al, 1987).

The dimensions of the problem are staggering. Carolyn Davis, head of the Health and Human Services Secretary's Commission on Nursing wrote, "Conservatively, we need about 200,000 nurses to fill the current vacancies," (1985).

The probability that this condition will worsen is evident from statistical data on enrollment in nursing schools. Donley and Flaherty state:

Since 1983, students in all RN programs have decreased more than 25 percent---from 250,000 in 1983 to fewer than 194,000 in 1986. Preliminary data from the NLN indicate enrollments will be less than 180,000 for 1987, (1989:184).

A recent federal report provided a disturbing picture when it projected a deficiency of 600,000 professional nurses by the year 2000, (Davis, 1985).

To compound the problem, increasing numbers of nurses are leaving the profession for jobs in other fields, (Burger, 1989:10). This trend is remarkable when viewed in the context of the past six years. As recently as 1983, hospitals nationwide were unable to employ all the nurses who applied for work. A representative from a major Los Angeles institution stated they were splitting each vacant full-time position into two half-time appointments so that work could be offered to two individuals rather than one. The question arises as to what is causing this marked change in such a large, long-standing, formerly rewarding, occupational field.

STRESS FACTORS IN HEALTH-CARE SETTING

Nursing has always been associated with conditions of life and death, illness and suffering, recovery or stabilization; however, the severity of illness and
the complexity of care in hospitals has never been as great as it is today. Traditionally, nurses have had little say in determining their working conditions and relatively no recognition for their knowledge and ability to participate in planning patient care. Even their schedules, salaries and job benefits were determined by management without nursing input. This situation has caused problems over the years but the intensity and demands of practice in today's hospitals motivates nurses to leave positions in which they have no opportunity for participating in decisions affecting their practice.

A 1982 project by a team of occupational sociologists studied various work settings and found identifiable job types or positions which were seen as placing above average pressure on the worker. These strains were related to the work environment and/or the job content. Four problem areas were categorized as:

"quantitative overload: too much to do, excessive time pressure. . . .

"qualitative underload: too narrow and one-sided job content, lack of stimulus variation, no demands on creativity or problem-solving, or low opportunities for social interaction,

"lack of control: especially in relation to pace of work and working methods,

"lack of social support: inadequate social networks at home and with fellow workers," (Elliott & Eisdorfer, 1982:122).

Another study done specifically with nursing personnel showed similar findings plus other negative conditions in the job setting. According to these researchers, stress exists as a major issue in nursing. Factors which their subjects identified as imposing job-related pressures were: staff shortages, increased demands by management, the need for greater knowledge and skills (compared with requirements when first employed), patients who were more
critically ill, and an unmanageable work load (in terms of maintaining quality of work). Nurses also suffered from unrealistic self-expectations, a high-intensity work environment and an increasing number and variety of health workers with whom care of patients was coordinated, (Gallagher, 1989).

RELATIONSHIP BETWEEN STRESS & BURNOUT

Stress is described as the non-specific response of the human organism to a change in its environment. As such it can be a positive factor, providing heightened awareness and energy to deal with the precipitating stimulus. In contrast, too much stress or stress continued without remission over an extended period of time is detrimental to human well-being. Hans Selye has been a pioneer in the study of this phenomena. He identified two types of stress, "eustress" a positive condition, functional for meeting life's challenges and "distress" a negative condition resulting from too intense or unremitting demands on the person, (1976). Prolonged exposure to unrelied, high levels of distress whether from physical, psychological, social or environmental demands leads to a newly recognized condition titled "burnout". Quoting from Arnold, "Burnout, defined as "exhaustion of physical and emotional strength", is a term used to describe the end result of prolonged stress. . ." She further states that sustained, intense stress decreases productivity and narrows the individual's perceptions. Too much stress blocks learning and decreases problem-solving ability, (1989:325). Drs. Sally and Rena Lawrence have done extensive study in the area of stress and burnout in nursing. A recent article by these authors reads as follows:

Common stressors for nurses are environmental conditions, emotional problems of patients and families, demands of patients and supervisors, working conditions, interpersonal and collegial relationships, and contemporary ethical and moral dilemmas. The list of stressors is endless because of
the nature of the nursing profession. Unrealistic self-expectations are perhaps the most critical sources of stress, (1987/88:45).

Scully concurs with the Lawrence statement; he writes, "Expecting too much of oneself can lead to burnout faster than any other single stressor," (1980:912).

Smyth in her book, *Surviving Nursing* elaborates on the "burnout" phenomena:

the three major causes . . . are (1) a mismatch between efforts and results leading to disappointment and frustration, (2) a mismatch between nurse and environment leading to role ambiguity and conflict, and (3) a mismatch between people leading to interpersonal conflict, (1984:34).

Storlie adds a final dimension, "... disillusionment and burnout follow confrontation with reality in which the human spirit is pitted against circumstances intractable to change," (1979:2108).

Based on the foregoing discussion it would appear that nursing as a career option is in a bleak situation in terms of negative job conditions and the difficulty of retaining current practitioners or recruiting new members. Why then do a significant number of students, 100,791 in 1985-86, (Donley & Flaherty, 1989) continue to enroll in schools of nursing? Obviously the profession is still seen as an occupation which provides a recognizable number of benefits to the newcomer.

VALUES RELATED TO NURSING AS A CAREER Choice

The occupational characteristics which have drawn aspirants to nursing still characterize the discipline. A study done in 1973 questioned students regarding their reasons for choosing to study nursing. Responses included: a chance to help people, variety of job options, opportunities for advancement, job security,
working with people rather than "things" and, being a member of a respected occupation. The category, "chance to help people" was rated as most important twice as often as any other feature, (Sczekan & Betz, 1973). Neff in the book, Work and Human Behavior lists characteristics that are particularly significant for career choice. These factors include provision of self-esteem, respect from others and opportunities for creativity, (1985:139-153).

What is the significance of the data and issues presented to this point? Why should Seventh-day Adventist educators be concerned about declining numbers of nursing practitioners and what, if any action should be taken?

CHURCH EMPHASIS ON THE FIELD OF HEALTH

From its inception as a distinct religious organization with an established set of doctrines and purpose, the Adventist church has emphasized the holistic nature of man and the importance of physical and mental health. A recent publication titled Seventh-day Adventists believe... A Biblical Exposition of Fundamental Doctrines, Item 21 reads:

... involve ourselves only in those things which will produce Christ like purity, health, (emphasis added), and joy in our lives... It also means because our bodies are the temples of the Holy Spirit, we are to care for them intelligently, (Ministerial Association,1988:278).

and again,

As Christians we are concerned with both the spiritual and the physical aspects of people's lives. Jesus our pattern, healed "every disease and sickness of the people, (p.280).

Ellen White, a leader in the early days of the church wrote, "The first study of the young should be to know themselves and how to keep their bodies in
Acknowledgement of a basic, health-centered mission, and acceptance of a divine commission to care for the sick was reflected in a decision (1866) to establish a church-operated, major health-care institution. Since that date, the health-focused branch of the church has shown phenomenal growth. Statistics listed in the church’s 1989 yearbook provide an impressive profile of the health care efforts.

HEALTH MINISTRY*

| Hospitals and Sanitariums      | 147 |
| Dispensaries, clinics and launches | 284 |
| Retirement homes and orphanages   | 95  |
| Physicians, Dentists, Residents & Interns | 1,736 |
| Nurses                          | 13,364 |

Assets of Health-care Institutions: $2,725,331,102.


When establishing health care facilities church officers were instructed that the facilities were not to be ordinary institutions, rather they were to have a distinctive character and focus. Ellen White wrote extensively on this topic:

Seventh-day Adventist institutions are to represent the various features of gospel medical missionary work and thus to prepare the way for the coming of the Lord, (1951:406).

Our sanitariums are the right hand of the gospel, opening doors whereby suffering humanity may be reached with the glad tidings of healing through Christ, (1923:212).

Institutions for the care of the sick are to be established, where men and women may be placed under the care of God-fearing medical missionaries, . . . they (patients) are to be cared for by wise physicians and nurses, (1923:12).

The Christian nurse, while administering treatment for the restoration of health, will pleasantly and successfully draw the mind of the patient to Christ, the healer of the soul as well as the body, (1923:406).

It is obvious then that provision of health services and education of nurses and other service personnel was and is a high priority of the Seventh-day
Adventist church. Unfortunately, administrators in denominational health-care institutions are experiencing the same personnel shortages as their counterparts in public facilities. During a recent meeting of nurse executives from four Adventist institutions, serious concern was expressed regarding the inability to adequately staff hospital units. More critical is the fact that, of the staff currently employed in denominational facilities, less than 15% subscribe to the Adventist doctrines. Gaeblein, discussing a mandate for employing Christian rather than secular teachers in a religious college made the statement, "Compromise of this issue, if persisted in always results in the progressive de-Christianizing of an institution," (1968:37). If the central purpose of Adventist-operated hospitals is to advocate and demonstrate denominational health standards and their philosophy of Christian care, then the institutions are prevented from fulfilling their mission when more than 80% of their service is provided by non-believing, non-conforming personnel.

As a means of preparing workers who are not only qualified with the necessary occupational abilities but more important, who support the religious values and perspectives, educational programs in a variety of health care disciplines are offered in denominational colleges. At the present time, Adventists operate two medical universities and offer nursing education in more than twenty North American programs.

NURSING EDUCATION

Educational programs leading to a degree in nursing are similar in some respects yet markedly different in others from the majority of academic majors offered in institutions of higher learning. All degree programs include courses in the
sciences, communication, social studies, liberal arts, academic major and general education electives. In this respect nursing is comparable with other disciplines. Differences for nursing appear in the significantly greater amount of credit and time allocated for required, clinical laboratory components when compared with other academic majors. The time spent in required class activities by the average chemistry student, (16 credit hours, two lab courses) is 21 clock hours per week. In contrast, the contact hour commitment for a nursing student (15 credit hours, two lab courses) is approximately 30 clock hours per week. A second difference for nursing is also related to the laboratory experience. Instead of being on campus in a regulated, familiar setting, nursing students spend 10 to 15 hours per week in a complex, unpredictable, high-tech hospital setting. And, instead of working with inanimate clinical materials they provide direct and intrusive care to human beings in pain. Not only must students master extensive theoretical content, they must also learn interpersonal and technical skills and utilize these competencies in the service area. Finally, the character and intensity of the clinical experience is different from any on-campus activities. Students care for individuals with a variety of health problems. A patient may be recovering from an elective surgical procedure or they may be dying from a terminal illness. In every case, students must deal with their own intense emotional feelings while providing nursing care and psychological support to patients and their families. In reporting on a research project studying deviant behavior in nursing students, Hilbert notes that students reported excessive and unrelenting pressure in the academic program.

Health problems of the students were often stress related. (problems cited) were: "pressure for good grades," "lack of time," "lack of self-confidence," and "afraid of poor clinical evaluations," (1987:39).
Earlier in this paper recognition was given to the stressful nature of the health-care setting. The predisposition to burnout and its negative effects on personnel was seen as directly related to the condition of unrelieved stress. When the educational sequence is reviewed, it appears that academic pressures experienced by nursing students may be as great as those encountered in the health-care practice area. Unfortunately, students have little knowledge regarding the nature of their stress, its potentially damaging effects or of strategies available for relieving their strain. It is likely that these conditions are at least partly responsible for the high rate of academic failure and change of major by students in nursing. Gallagher states,

I believe that cumulative stress that leads to burnout has caused tremendous losses of professional nurses. Because nurses tend to place themselves last, they are all too willing to take on additional responsibility. . . . it is critical that nurses begin the ongoing effort of managing stress, (1989:60,61).

Faculty in nursing schools focus their attention on equipping students with the theoretical knowledge and the practical abilities necessary for contemporary health practice. The instructors are responsible for preparing students with the knowledge and problem-solving ability necessary for successful performance on the state licensing examination and for subsequent practice. If the graduate does not pass the test, they will not be allowed to practice nursing regardless of their academic record. Because of these expectations, the majority of instructional effort is placed on transmitting didactic information with little or no emphasis on preparing students to cope with stress and avoid burnout. Burger notes the failure to deal effectively with the problem in the employment setting and offers some suggestions for its relief; it is possible that similar
action would be effective in the educational arena as well.

As nurses we fight tough battles; we mourn with patients and their families; we compassionately absorb their burdens; we try to untangle convoluted problems. When we can take no more, we become critical and resentful of each other rather than supporting each other. Let’s acknowledge our stress and grief: tell our colleagues when we are overwhelmed; and accept help from others like social workers, chaplains or counselors, (1989:12).

Academic institutions operated by the Adventist church are committed to providing education within a Christian frame of reference. This perspective recognizes and promotes the spiritual dimension as a guiding force for a productive life and as a personal resource for meeting life’s problems. Faculty are expected to provide students with the best educational experiences possible while at all times they are to demonstrate concern for students’ emotional and spiritual well-being. Educational curricula include requirements in general education, science, religion and the academic major. While nursing programs follow a similar sequence, the time frame and setting for learning activities is more intense than for other disciplines. Attention is given to spiritual values and influence as elements which effect the life and health of patients and as factors which must be considered and supported. Students are encouraged to develop and maintain a day by day, personal relationship with God. However, they are not introduced to a program of individually assessing their own emotional, spiritual and physical health on a daily basis. Finally, the specific use of spiritual resources in maintaining inner peace, restoring confidence and reducing stress in academic and clinical settings is not specifically addressed.
NURSING STUDENTS' PRECEPTIONS OF STRESS

As a means of determining whether students actually perceived their academic program as stressful and, if so what actions they took as a result, a six item, self-rating survey was done at a small, liberal arts college. The survey instrument consisted of a two-page, self-administered questionnaire asking students to rank a series of factors according to the amount of stress they felt from these items. Following response to the stress-focused questions, subjects were then asked to rank order a list of activities which they would use to relieve their tension, (see Appendix for questionnaire). The only instructions given to students participating in the project was that they should consider their over-all college experience when responding to the items. Twenty-one nursing students completed the survey. Because of the small sample size and the brevity of the survey instrument, no generalizations or conclusions can be drawn. However, trends were apparent even in this "mini"-pilot study. Students clearly rated the clinical practicum as most stressful of all academic factors. In the non-academic area, getting adequate rest and exercise and meeting financial obligations were rated highest. The highest ranked factor producing social/personal stress was finding adequate time to be alone. This item was rated by students as more stressful than other factors in both first and second level rankings. When asked to sequentially order the actions they would take to reduce pressure in the academic area, meeting with an instructor was marked fifth (relatively last) choice by the majority of students. In responding to a question asking how helpful the campus religious activities/emphasis were in reducing pressures of being a student, one student said never, five said seldom, and seven said sometimes. Only six students reported that the spiritual emphasis
was usually or always helpful.

The study reported here is obviously too small and imprecise to be taken at face value however, the responses indicate that students do not see faculty as first-level resource persons when they are having difficulty with their course work. (The survey was conducted during the closing weeks of the semester, rating of items might have been different if done early in an academic term). Finally, the fact that many students do not view the religious features of the college as helping them with the problems they are experiencing points out a need for careful attention by the faculty. These indications are especially significant for instructors in nursing. Arnold writes:

Since nursing practice is a relational, mutually interactive process in which the nurse and client are engaged as whole persons, the spiritual life and well-being of the nurse are pivotal considerations in helping assigned clients achieve optimal physical, spiritual, and psychological well-being and self-care capacity. Without a consideration of the spiritual nature of the nurse and its relational impact on the client, the subject of spirituality in nursing practice is one-sided and incomplete, (1989:321).

CONCLUSIONS AND FUTURE DIRECTIONS

The seriousness of problems in the field of nursing as described in this paper are of major concern to nurse educators. Schools of nursing are continually reviewing and revising their academic programs in an effort to make the educational experience as meaningful and effective for students as possible. Within the context of Christian education and values, nursing faculty in Adventist institutions have a special obligation to prepare students not only with the necessary intellectual and practice abilities but also to assist students in developing inner strengths for coping with the demands of a
challenging profession. The findings in this report will be shared with faculty at the author's home institution. Time will be spent in curriculum meetings for addressing the problem of stress as it effects students. Consideration will be given to developing an assessment guide by which students can evaluate their own health state: physical, intellectual, emotional and spiritual. Incorporated with the guide will be suggested strategies and check lists for use by students in monitoring and promoting their own well-being. Faculty will examine ways in which students can be encouraged to see faculty as primary resource people, individuals who are committed to helping students achieve personally rewarding and productive lives. Careful review of the curriculum will be conducted to assure that the unique, spiritual values and health principles of the church are clearly and effectively presented. Conferences will be held with the campus chaplain to explore ways of strengthening the spiritual dimension in course materials.

The shortage of professional nurses in America is a national problem, one which will become progressively worse without immediate and concerted action. Faculty in nursing schools have an important responsibility to prepare students for the demanding but rewarding nature of their career choice. The activities listed above reflect one approach to fulfilling the responsibilities of Christian educators to the students, the college, the instructors themselves, to the church and to their God.
BIBLIOGRAPHY


APPENDIX
In reducing pressures in the various situations what activities or resources do you use? Please rank order from 1 to 6, 1 being the thing you would do first.

Academic factors

__ a. spend extra time studying
__ b. ask classmates for answers or suggestions
__ c. ask to meet with the instructor
__ d. pray about the problem
__ e. try to get extra rest or relaxation
__ f. other, please describe ____________________________

Non-academic

__ a. cut back on study time to get more rest and/or exercise
__ b. look for a different job
__ c. increase work hours to get more income
__ d. discuss family problems with spouse/children
__ e. get advice from an outside person, (counselor/pastor/friend)
__ f. other, please describe ____________________________

Social or personal

__ a. go off campus, (take a walk or drive, go to a park)
__ b. avoid on and off campus social activities
__ c. join a club or social group
__ d. do some religious activity, (pray, read, attend service)
__ e. discuss with counselor (pastor, faculty or other person)
__ f. other, please describe ____________________________

Two final questions,

1. Do you find the spiritual emphasis and/or the religious activities on this campus helpful to you personally in reducing pressures of being a student?

   __ never ___ seldom ___ sometimes ___ usually ___ always

2. In your opinion, are the religious beliefs and values of the faculty demonstrated in a caring/helping attitude with students?

   __ always ___ sometimes ___ infrequently ___ never

Please write in any comments or suggestions. Thank you for your assistance.

Maypole Sczbon