

# IDENTIFICATION OF HEALTH RISK FACTORS AMONG UNDERGRADUATE UNIVERSITY STUDENTS

## Stage 3: Development of a Holistic Health Assessment Tool

Anna Gupta . Sharon McMahon . Gurpal Sandhu

Research reported on by Irons and Thompson, cited in Bensley (1981), indicates that the lifestyles of college and university students could contribute to future health problems. Their study pointed out that over 29% of the students admitted having irregular dietary habits; 40% indicated that they did not engage in any form of regular strenuous exercise; 18% admitted to exceeding the speed limit when driving; and 6% admitted to driving after alcohol consumption.

The above findings were closely replicated in health assessment clinics and a Health Hazard Appraisal (HHA) of undergraduate students that we conducted at the University of Windsor (U of W). As reported in earlier articles (Gupta, McMahon, & Sandhu, 1985a, 1985b), our findings identified additional specific health risks in the U of W student population. One unexpected area of health risk was the high percentage of diabetics. Alcohol abuse, suicide attempts, and family histories of depression were other concerns revealed.

What began as field experience for post Basic Baccalaureate nursing students became an activity that reinforced our concerns about the health status and lifestyle patterns of the U of W students. Readings and research reports from other settings emphasized the need for a more holistic assessment of health and health risks of the students.

In view of the deficiencies of the standardized assessment procedures with HHA and the Canada Fitness Test and in keeping with our beliefs in holistic care and "high-level wellness", we looked for a survey format that could provide more encompassing information for the student health profiles. Our hope was that such self-appraisal of health status, of practices, of beliefs, and of perceived needs would promote students' health-seeking behaviours and increase the use of campus and community resources. Also, we hoped that data gathered through a more holistic approach would guide the "campus care-providers" in furnishing coordinated and collaborative health promotion services on campus.

Anna Gupta, R.N., M.Sc.N., is Professor and Sharon McMahon, R.N., M.Ed., is Assistant Professor, School of Nursing, University of Windsor, ON. Gurpal Sandhu, R.N., M.Sc.N., was Assistant Professor of Nursing, University of Windsor.
---

Dunn (1961) first defined high-level wellness as "an integrated method of functioning which is oriented toward maximizing the potential of which the individual is capable, within the environment where he is functioning." Hettler (1980) writes that each individual develops a unique lifestyle that changes daily in the reflection of his or her intellectual, emotional, physical, social, occupational, and spiritual dimensions, and that wellness is a positive approach that emphasizes the whole person. Milsum (1980) states that a sense of purpose is essential in the long run for any individual to maintain health. The sense of purpose is fostered in an environment having meaning and coherence. In such environments, all the classic characteristics of healthy individuals and societies - notably stimulation, challenge, love, joy, happiness, laughter, intimacy, service, wonder, and reverence - can blossom. Those whose bodies are well nourished and well exercised are also those whose brains are more effective vehicles by which these aspects flourish. Indeed, the continuing challenge is to realize the necessity for ever increasing integration of physical, mental, social, and spiritual aspects into a whole person.

### **Development of the Instrument**

To start with, we examined several questionnaires from Canada and the United States. While some formats were detailed, many were lengthy, cumbersome, repetitive, site-specific, or not comprehensive enough. Such concerns as spiritual health, normative developmental crises, or questions about daily health patterns and practices were omitted. Hence, we decided to develop a questionnaire that might have more global applicability, yet would allow for holistic identification of student health and lifestyle patterns, learning needs, and health promotion programme desires. Hettler (1982), Flynn (1980), and Mezey and Chiamulera (1980) provided guidance and models for the development of this pilot tool.

The newly developed questionnaire, the Holistic Health-Assessment Tool (HHAT), includes routine aspects of demographics and use of campus or community health resources, as well as inquiries about daily patterns of sleep, diet, recreation, exercise, substance use, driving habits, sexual activity, emotional state, spiritual beliefs, and a life activities inventory. It also includes assessment of students' health knowledge, health interest, and their perceived needs for health promotion and health maintenance programmes on campus.

### ***Questionnaire revision and analysis***

The questionnaire was pre-tested on 155 students. Revisions were made with regard to weighting of questions, reorganization of segments, numerical sequencing, gender identification, and multiple-answer potential.

The revised survey was then administered to a convenient volunteer population of 35 nursing students. Over a ten day interval, test-retest reliability yielded a correlation coefficient of .81. This was interpreted as being significant, and reflected high reliability on all but four items in the segment titled "Psycho-Social-Emotional Aspects". The weaker test-retest reliability in this section can be interpreted, in a positive manner, as an indicator of the labile emotional responsiveness of students at varying times even days apart. This is consistent with findings by Kanner, Coyne, Schaefer, and Lazarus (1981) in their work on "uplifts" and "hassles" of daily life - particularly in college and university populations. The authors recommend the inclusion of this segment in its present form until further evaluation of the questions or testing of a reliable tool for emotional content is found.

One suggestion for further refinement might include a separate questionnaire segment for males in which questions about regular reproductive system examinations, health concerns, risks, and interests could be considered.

Others might be attempting to construct similar instruments. The questionnaire will be available to those individuals and agencies interested in using it and/or for further evaluation. Persons wishing a copy of the questionnaire may write to the authors.

## Discussion

In discussing results related to student health status the following factors must be remembered. The sample is not representative of the undergraduate university students as only those volunteers taking first year courses participated in the first run, and only fourth year nursing students participated in the reliability testings. As well, the size of the sample is very small.

In spite of the stated limitations, findings related to smoking, alcohol consumption, driving and seat belt use are very similar to those obtained for the HHA. Other areas where responses were very similar were: exercise habits; concern over weight control; meal selection, food consumption, and knowledge of food risks; and sources of social and emotional support and tension.

Among specific features of this study, we found that students who responded to the items on drug or substance abuse were a minority. This could perhaps result from the fear of prosecution. Also, perhaps denial of this behaviour provides a psychological and sociological protection mechanism. Selective choice of "no response", as opposed to omission, was also noted in questions concerning sexual activity. However, the number of "no answers"

were fewer in this category, indicating perhaps that sexual activity and contraceptive measures are more acceptable to disclose and discuss.

Sleep and study habits revealed emotional and behavioural aspects of student life that could influence achievement, emotional comfort, and self-esteem.

Findings also revealed that first year students used the on-campus physician and health services more than students in other years. The majority of respondents stated that the quality of health services was satisfactory.

Over 80% of the subjects had a yearly physical examination. They were less conscientious about dental examinations.

In both the Health Hazard Appraisal (Gupta et al., 1985b) and the Holistic Health Assessment Tool (HHAT), respondents expressed desires for programming and educational services. Needs that were frequently identified were programmes for exercise and weight control; family planning; cancer prevention and risk identification; and stress management.

The researchers conclude that the common findings in the initial pilot run and in the revised test-retest assessment are supportive of the main purpose of this survey -- the development of a HHAT that would highlight and profile the health status, health risks, lifestyle patterns, and health-seeking behaviours of students, as well as their health knowledge, interests, needs, and desires.

### **Recommendations**

The reliability and validity of the newly developed HHAT (*Stage 3*) should be evaluated further by using the tool on a larger and adequately representative sample of undergraduate students, from one or more settings.

Health Hazard Appraisal in *Stage 2* showed that further research is needed with regard to the causes and effects of student drinking. The subjects should be referred to counselling services, and the effectiveness of such services should be evaluated. As well, a study should be done to investigate the effects of regular physical activity on the health, wellness and academic achievement of students.

We also feel that a study on the effects of health promotion programmes that are based on health risk identification for undergraduate university students using the Student Academic Readjustment Scale (SARRS) (Gupta et al, 1985a), HHA, and HHAT instruments is necessary.



## *Dealing with health risks*

Overall findings of the total project "Identification of Health Risk Factors Among Undergraduate University Students" confirm that university life exposes students to a variety of stressors, and that students are subject to a variety of serious health risks.

Hettler (1980) divides wellness into six basic dimensions: intellectual, emotional, physical, social, occupational, and spiritual. He suggests that the function of a university is to provide an atmosphere and physical environment in which the students have an opportunity to improve their knowledge, skills, and attitudes. Most colleges and universities provide the atmosphere and physical environment only for intellectual development. Few provide equal resources for fostering the other five dimensions of wellness.

Comprehensive wellness promotion on a university campus has the potential to increase students' performance in academic programmes. There is good evidence that many of the causes of death by age 40 are the result of behaviours that were established during the adolescent and young adult years. We believe that wellness promotion also improves students' chances for success and healthy lives once they have graduated.

The literature provides reports on many American university campus health promotion services organized by nursing faculties and departments (Frachel, 1984; Glanovsky & Provost, 1984; Hawkins, Kurien, Roberto, & Stanley, 1985; Mezey & Chiamulera, 1980).

We believe that, philosophically and conceptually, faculty in schools of nursing should assume active leadership roles on a personal and a professional level, to promote the "high level wellness" of the campus community, especially of the undergraduate students. Alcohol awareness and stress management sessions; spare time exercise programmes; nutrition and anti-smoking clinics; campaigns to use seat belts; and screening for hypertension, cancer, and mental health problems all need to be carried out more frequently than is at present the case in most Canadian universities.

## REFERENCES

- Bensley, L.B. (1981, November-December). Health risk appraisals in teaching health education in colleges and universities. *Health Education*, 31-33.
- Dunn, H. (1961). *High level wellness*. Virginia: Beatty.
- Flynn, P.A. (1980). *Holistic health*. Bowie, Maryland: Brady.
- Frachel, R. (1984). Health hazard appraisal: Personal and professional implications. *Journal of Nursing Education*, 23, 265-276.
- Glanovsky, A.R. & Provost, M.B. (1984). The Elms College Nursing Centre: An independent setting for translating theory into practice. *Journal of Nursing Education*, 23, 209-211.
- Gupta, A., McMahon, S., & Sandhu, G. (1985a). Identification of health risk factors among undergraduate university students. Stage 1. *Nursing Papers*, 17 (2), 22-36.
- Gupta, A., McMahon, S., & Sandhu, G. (1985b). Identification of health risk factors among undergraduate university students. Stage 2. *Nursing Papers*, 17 (3), 27-46.
- Hawkins, J.W., Kurien, M., Roberto, D., & Stanley, L. (1985, January-February). A women's clinic in a university setting. *Nurse Educator*, 10 (1), 15-17.
- Hettler, B. (1980). Wellness promotion on a university campus. *Family and Community Health*, 3 (1), 77-92.
- Hettler, B. (1982). Wellness promotion and risk reduction on a university campus. In M.M. Faber and A.M. Reinhart (Eds.). *Promoting health through risk reduction*. New York: Macmillan.
- Kanner, A.D., Coyne, J.C., Schaefer, C., & Lazarus, R.S. (1981). Comparisons of two models of stress management; daily hassles and uplifts versus major life events. *Journal of Behavioral Medicine*, 4 (1), 1-39.
- Mezey, M., & Chiamulera, D.N. (1980). Implementation of a campus nursing and health information center in the baccalaureate curriculum. *Journal of Nursing Education*, 19 (5), 7-19.
- Milsum, J.H. (1980). Health risk factor reduction and lifestyle change. *Family and Community Health*, 3 (1), 1-12.

## RÉSUMÉ

### **Identification des facteurs de risque de maladies chez les étudiants de premier cycle universitaire Stage 3: Élaboration d'un instrument d'évaluation de santé holistique**

Étant donné l'absence d'instrument convenable pour une démarche holistique permettant l'identification des facteurs de risque parmi les étudiants de premier cycle universitaire, les chercheurs ont décidé de mettre au point un tel outil dans le cadre du troisième et dernier stade de leur projet. L'instrument récemment mis au point recouvre différentes sections telles que les schèmes d'alimentation, d'exercice et de sommeil; l'activité sexuelle, l'état affectif; les croyances spirituelles; la toxicomanie et le tabagisme; ainsi que d'autres inventaires du mode de vie. On a procédé à une évaluation pilote de l'instrument chez 155 sujets. L'instrument a été révisé et une étude de fiabilité test-retest a été effectuée sur un échantillon convenable de 35 étudiants en sciences infirmières; nous avons ainsi obtenu un taux de fiabilité de 0,81. Les profils de risques médicaux illustrés par les sondages pilotes et les évaluations test-retest ont confirmé le niveau de fiabilité et la validité de cet instrument d'évaluation de la santé holistique. Toutefois, l'instrument devra être soumis à une évaluation approfondie auprès d'un échantillon plus important et adéquat dans un ou plusieurs milieux. Cet instrument est accessible à ceux qui souhaitent l'utiliser ou approfondir son évaluation.