PEER SEXUAL HARASSMENT: A SOCIAL DETERMINANT OF ADOLESCENT HEALTH?

by

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ABSTRACT

The aim of this study was to expand our understanding of the experiences and health effects of school-based, peer sexual harassment among adolescents. The primary objective was to test a theoretical model of causal relationships between sexual harassment and psychological, physical, and behavioural health outcomes among female adolescents. A sub-objective was to examine the incidence and appraisal of peer sexual harassment by gender.

The study employed a retrospective cross-sectional survey design. Data were obtained from male and female high school students in grades 9 through 11; participants were recruited from 12 schools in British Columbia and New Brunswick. Data from all respondents (N = 565) were used to describe the students' sexual harassment experiences, although investigation into the relationships between harassment and health was conducted only for the female respondents (n = 348). Structural equation modelling was used to test the proposed theoretical model.

There were four major findings. First, sexual harassment was found to be pervasive among both male and female students in grades 9 through 11. However, female students experience a greater variety of harassment behaviours and more frequent harassment than male students, and they report being more upset by the harassment that they receive. Second, both male and female students report that, in general, gender harassment is more upsetting than unwanted sexual advances. Third, female students who experience more frequent and more upsetting sexual harassment also experience worse health outcomes. Sexual harassment was found to explain a good deal of the variance in negative health outcomes over and above the effects of other school-based stressors. Fourth, although female students are more likely to engage in behavioural coping responses as sexual harassment increases in frequency or degree of threat, these coping strategies do not necessarily mediate or reduce the harmful effects of sexual harassment.

The results of this study suggest that we should be wary about trivializing the possible consequences of sexual harassment among adolescents, even though adults might perceive some of the incidents to be mundane experiences. The implications of these findings for school health programs and other preventive interventions are discussed.
TABLE OF CONTENTS

Abstract .................................................. ii
List of Tables ................................................ vii
List of Figures ............................................. vii
Acknowledgements ......................................... viii

CHAPTER ONE - INTRODUCTION ............................. 1
Research Problem ........................................... 1
Legal and Social Definitions of Sexual Harassment .......... 2
The Scope of Peer Sexual Harassment ...................... 4
Health Consequences of Sexual Harassment ................. 7
Adolescent Health .......................................... 10
Summary of the Research Problem ......................... 11
Research Purpose ............................................ 12
Significance of the Study .................................. 13
Definition of Terms ....................................... 14
Overview of the Report ................................... 16

CHAPTER TWO - REVIEW OF THE LITERATURE .......... 17
Peer Sexual Harassment Among Adolescents .............. 17
Surveys of Adolescent Sexual Harassment ............... 17
Comparing Survey Results ................................ 23
Qualitative Studies of Sexual Harassment Among Adolescents .... 31
Summary of the Peer Sexual Harassment Literature .... 34
Health Outcomes of Sexual Harassment .................... 35
The Conceptualization of Effects .......................... 36
Workplace Harassment Health Outcomes .................. 37
Health Outcomes Among Adolescents ...................... 39
Indirect Health Effects ................................... 42
Summary of Sexual Harassment Health Outcomes Literature .... 43
Adolescent Health .......................................... 43
Adolescents’ Conceptualizations and Concerns About Health .... 44
Mental Health Status of Adolescents ....................... 46
Health-Risk Behaviours of Adolescents .................... 49
Summary of the Literature on Adolescent Health ........ 51
The Stress-Health Relationship Within Adolescence ........................................ 52
Categories of Stress ......................................................................................... 53
Adolescents' Perceptions of Stress ................................................................. 54
Stress-Health Linkages .................................................................................. 56
Evidence Linking Stress with Immune System Reactions ......................... 59
Evidence Linking Stress and Health-Related Behaviours ....................... 60
Evidence Linking Stress with Physical and Psychological Health Outcomes .................................................. 63
Mediators and Moderators of the Stress-Health Relationship .......... 65
Measurement Issues in Stress-Health Research ...................................... 68
Summary of the Literature on Adolescent Stress and Health ............. 69
Summary of Chapter Two ............................................................................. 69

CHAPTER THREE – THEORETICAL MODEL ............................................... 72
Hypothesized Theoretical Relations .............................................................. 75

CHAPTER FOUR – METHODS ...................................................................... 78
Sample ........................................................................................................ 78
  Setting and Participants ......................................................................... 78
  Sample Size ............................................................................................ 79
  Ethical Considerations ........................................................................... 80
  Recruitment of Participants ................................................................. 82
  Demographic Characteristics of the Sample ....................................... 83
Data Collection ............................................................................................ 84
Instrumentation .......................................................................................... 85
  Adolescent Sexual Harassment ............................................................ 86
  School Stressors Scale ........................................................................... 91
  Perceived Tolerance for Sexual Harassment ....................................... 93
  Coping with Harassment ...................................................................... 93
  Safety at School ..................................................................................... 95
  Centre for Epidemiologic Studies – Depression Scale (CES-D) .......... 95
  Physical Health Effects ......................................................................... 98
  Self-Worth ............................................................................................ 98
  Marlowe-Crowne Social Desirability Scale – Short Form C ............. 100
  Summary of Reliability Coefficients .................................................... 100
  Health-Risk Behaviours ........................................................................ 101
The Health Consequences of Sexual Harassment ........................................ 183
The Health Effects of Sexual Harassment .................................................. 185
The Mediation Effects of Coping ............................................................... 187
Implications for School Health Programs and Other Preventive Interventions .... 190
The Role of Nurses ................................................................................. 192
Recommendations for Future Research .................................................... 194
Conclusion .............................................................................................. 196

REFERENCES .......................................................................................... 200

APPENDICES .......................................................................................... 220
Appendix A – Information about Peer Harassment – Handout for Participants . 220
Appendix B – Resource Book Donated to Participating Schools ...................... 221
Appendix C – References/Resource List for School Counsellors ..................... 224
Appendix D – Letter to School Principal/District Superintendent .................. 225
Appendix E – Consent Form for School Principal/District Superintendent ....... 228
Appendix F – Student Recruitment Letter .................................................. 229
Appendix G – Cover Letter and Consent Form for Parents ......................... 230
Appendix H – Protocol for Administering the Survey ................................... 233
Appendix I – Questionnaire .................................................................... 234
# LIST OF FIGURES

1. Theoretical Model of the Relationships between Peer Sexual Harassment, Other School-Related Microstressors, and the Health and Health Behaviours of Adolescent Females ......................................................... 73
2. Revised Theoretical Model ........................................................................ 139
3. Measurement Model 1 ............................................................................ 140
4. Measurement Model 2 ............................................................................ 145
5. Structural Model 1 .................................................................................. 149
6. Structural Model 2 .................................................................................. 154
7. Mediation Model ...................................................................................... 153
8. Structural Model 3: Testing the Mediating Effects of "Responses to Harassment" ................................................................. 156
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CHAPTER ONE – INTRODUCTION

Research Problem

Although sexual harassment is increasingly recognized as part of the continuum of violence against women (Koss et al., 1994), to date it has been neglected by health care providers as a health issue among adolescents. This is in contrast to increased societal concern about sexual harassment in the workplace, and in universities and colleges, and the emerging concerns of educators about the sexual harassment of children and adolescents. Even with the recognition of adolescents as an at-risk group in terms of mental health status and health-related behaviours (CICH, 2000; Health Canada, 1999a; Gillis, 1996), and with increasing attention being directed to the broad determinants of their health (Health Canada, 1999a; Raphael, 1996), the health sequelae of sexual harassment has received little attention within the adolescent health and school health literature and, until recently, none within the nursing literature. A recent computerized search of the CINAHL and Medline data bases (using the terms sexual harassment and adolescents/adolescence with no year constraints) located only four articles pertaining to the health outcomes of sexual harassment among adolescents or nurses’ responsibilities in this area (Bagley, Bolitho, & Bertrand, 1997; Berman, McKenna, Arnold, Taylor, & MacQuarrie, 2000; Dahinten, 1999; Fahrenwald, Fischer, Boysen, & Maurer, 1999). In startling contrast, abundant attention has been directed towards the sexual harassment of nurses and other health care professionals.

Most of the investigation into the sexual harassment experiences of adolescents has emerged from the fields of education, psychology, and social work. Although it, too, is still in a nascent stage, findings indicate that peer sexual harassment (i.e., student-to-student) is both widespread and pernicious, at least for female adolescents. This should not be surprising given
that the American Psychiatric Association has recognized sexual harassment in the workplace as a significant stressor in the lives of women (as cited in Koss et al., 1994) and the abundant evidence linking psychosocial stressors with negative physical, psychological, and behavioural health outcomes within the adult population. Although adolescence is generally conceived of as a particularly healthy time of life, it is known that adolescents engage in serious health-risk behaviours which have implications for long-term lifestyle and health outcomes (CICH, 2000; Health Canada, 1999a) and suffer disturbing levels of psychological distress such as depression and low self esteem (Health Canada, 1999a), possibly in response to the stressors in their lives. Stress is a meaningful construct for nursing because of its well-documented association with illness and other negative health outcomes. Stress and coping theory is, therefore, an appropriate conceptual framework to bring to the study of sexual harassment and the health of adolescents.

Legal and Social Definitions of Sexual Harassment

Discussions of sexual harassment are complicated by the lack of a single, unambiguous definition of sexual harassment. Sexual harassment was originally thought to refer only to situations in which women are threatened with loss of employment or career advancement as a means of extorting their sexual cooperation (Koss et al., 1994), and as such required an imbalance of power and abuse of authority. Now, however, sexual harassment is seen to include “any type of unwelcome conduct directed toward an employee or student because of his or her gender” (Strauss, 1992, p. 5). As one young women in a Canadian high school described it, “Sexual harassment is something that makes you feel uncomfortable about who you are ... because of the sex you are.” (Larkin, 1994, p. 21).

Sexual harassment is considered to be a form of discrimination according to the Canadian Human Rights Commission (1991) and the United States (US) Civil Rights Act, and is
specifically prohibited in US federally funded schools by Title IX of the 1972 Educational Amendments (as cited in Koss et al., 1994). There are two broad categories of sexual harassment, both of which are illegal. Sexually coercive behaviour, with its threatened consequences to an individual's employment or academic status, is referred to as *quid pro quo* harassment. The other category of harassment behaviour, which is more relevant to a discussion of adolescent peer sexual harassment, is termed *hostile environment*. Hostile environment sexual harassment refers to any verbal or physical behaviour which creates an intimidating, hostile, or offensive environment, thus interfering with “a student’s ability to learn” (Paludi, 1997, p. 226) or “right to receive an equal educational opportunity” (Stein, 1995, p. 148). Legal rulings in Canada and the US have indicated that hostile environment sexual harassment includes negative and degrading comments about a person's gender or gender-related attributes. These sex-related, but not specifically sexual behaviours are termed *gender harassment* (Koss et al., 1994).

As suggested above, sexual harassment involves a wide range of behaviours ranging from unwelcome sexual references and sexist comments to unwelcome sexual advances and forms of sexual imposition or physical contact which may cross over into the legal definition of sexual assault. Spreading sexual rumors, pulling someone’s clothes off, making sexual gestures, touching, pinching, or grabbing someone, or rating a person on their attractiveness or sexual skills are all harassment behaviours. And although the behaviours may be explained by the perpetrator as harmless flirting or merely a joke, both legal and behaviour definitions of sexual harassment acknowledge the phenomenal experience of the recipient. It is “the impact of the behaviour, not the intent” (Paludi, 1997, p. 227) which is most critical in determining whether sexual harassment has occurred.
Students are able to discern a difference between flirting and sexual harassment. Students have commented that flirting “feels good, makes me feel attractive, is a compliment, is two-way, [and] is positive”. Sexual harassment on the other hand “feels bad, is degrading, makes me feel cheap, is one way, makes me feel helpless ... and out of control” (as cited in Paludi, 1997, p. 228). These students’ views are congruent with Halson’s (1989) definition of sexual harassment as “non-reciprocal, unsolicited masculine behaviour which asserts a girl’s or woman’s sexual identity over her identity as a person” (p.132), even though we now recognize that females may also perpetrate sexual harassment against males, and that same-sex harassment also occurs.

The Scope of Peer Sexual Harassment

During the last decade, there has been considerable research into the prevalence and incidence of sexual harassment within the adolescent population (AAUW, 1993; Fineran & Bennett, 1999; OSSTF, 1995; Stein, Marshall, & Tropp, 1993; Trigg & Wittenstrom, 1996). The best information, albeit American based, comes from the Hostile Hallways study commissioned by the American Association of University Women (1993) which included a random sample of 1,600 students in grades 8 through 11 in 79 secondary schools across the US. The key findings, which pertain only to school-related experiences during school-related times, are as follows.

Sexual harassment is a common experience for female high school students. Eighty-five percent of the female students reported being victimized by sexual harassment. Although the incidence of sexual harassment was less clearly defined, 31% reported that they were “often” the target of sexual harassment in school. The ambiguity of the term “often” points to the need to gather more precise frequency data when surveying adolescents about sexual harassment victimization. Non-physical harassment was the most common experience, including sexual comments, jokes, gestures, and looks. However, 65% of the girls reported being touched,
grabbed, or pinched in a sexual way, and 13% had been forced to do something sexual other than kissing. Although the questionnaire included 14 items addressing both physical and non-physical harassment behaviours, it is noted that gender harassment was not addressed except for one item asking about being called gay or lesbian. It is possible that prevalence and incidence rates might have been even higher, had the full spectrum of sexual harassment been addressed. By far, the largest proportion of the harassment experienced in school came from other students rather than teachers or other staff, and was a public (not secret) occurrence. Eighty-six percent of the female harassment victims reported being harassed by their peers, whereas 25% reported being harassed by school staff; and they reported experiencing harassment in the hallway (73%), in the classroom (65%), on school grounds (48%) and in the cafeteria (34%). Indeed, Stein (1995) has referred to sexual harassment in schools as “the public performance of gendered violence” (p. 145). (The term gendered violence is used within feminist literature to direct attention to the role of gender and its social construction as underlying features of male violence against women.)

Additional evidence supporting these findings come from the 1992 mail-in survey conducted by the Wellesley College Center for Research on Women through Seventeen magazine (Stein et al., 1993), as well as two other American studies which used a modified version of the AAUW questionnaire (Fineran & Bennett, 1999; Trigg & Wittenstrom, 1996). Particularly significant findings of the Seventeen study were that 39% of the girls and young women (n = 4200, ages 9 to 19 years) reported being harassed at school on a daily basis throughout the prior year, and reports that sexual harassment extends into the elementary system. Survey research into the sexual harassment of Canadian children and adolescents has been limited to studies by the Ontario Secondary School Teachers’ Federation (1995) and McMaster et al. (2000), although there have been qualitative studies examining the experience and meaning of sexual harassment...
Harassment of Boys. Females are not the sole targets of sexual harassment. Indeed, prevalence statistics from a number of studies (AAUW, 1993; Fineran & Bennett, 1999; Trigg & Wittenstrom, 1996) show a fairly narrow gender gap in terms of ever being harassed, although the frequency is far less for boys (i.e., roughly the same proportion of girls and boys are harassed at some point in their lives, but a girl is harassed many more times during her life than is a boy). In addition, findings from these studies, and from Collinsworth’s (1997) work, strongly suggest that the educational and emotional experiences of harassment are qualitatively different for boys. For example, a much lower percentage of the boys who were harassed report changing their behaviour in response to the harassment or not wanting to go to school. In the New Jersey study (Trigg & Wittenstrom), 52% of the girls, but only 19% of the boys reported being very or somewhat upset by the harassment.

Challenges of Recognition and Measurement. The measurement of sexual harassment is complicated by definitional issues and the sheer prevalence of the problem. Research findings suggest that, unless there has been some physical assault, most students in higher education and women in the workplace do not label their experiences as sexual harassment despite their feelings of distress and the fact that the behaviour meets legal definitions of harassment (Fitzgerald, 1990; Paludi & Barickman, as cited in Paludi, 1997). Another challenge in recognizing and addressing sexual harassment among adolescents is what may be termed the paradox of its prevalence. As argued by other feminist researchers (Halson, 1989; Jones, 1985; Larkin, 1994; Stein, 1993; Trigg & Wittenstrom, 1996) sexual harassment is so commonplace that it has been normalized by young women who often simply accept the behaviours and resulting distress as an inevitable part of being female. This normalization is further reinforced.
by the way in which the behaviours have been tolerated and interpreted within the peer group, and by others, as natural expressions of masculinity (McBride, 1998) and by its exclusion from surveys and discussions of school violence (Larkin). It may also be, that given society’s tolerance of other more brutal violence against women, sexual harassment is seen as a somewhat trivial concern (Koss et al., 1994). In partial response, the following section addresses the health-related sequelae of sexual harassment.

Health Consequence of Sexual Harassment

Despite the increasing number of studies into the occurrence of sexual harassment among children and adolescents, there has been very little rigorous investigation into its health effects (cf. McMaster et al., 2000). Outcome data for adult victims is somewhat less scarce, but until recently, has tended to be limited to anecdotal accounts from self-identified victims or clinical accounts of those who have sought professional assistance (Fitzgerald, 1993; Hamilton, Alagna, King, & Lloyd, 1987; Salisbury, Ginorio, Remick, & Stringer, 1986; Schneider, Swan, & Fitzgerald, 1997). Nonetheless, the data that do exist suggest that sexual harassment poses a significant threat to women’s health and well-being (Dansky & Kilpatrick, 1997; Koss et al., 1994), both directly and indirectly.

Physical and Emotional Health Effects. Adult victims of sexual harassment have reported a range of emotional effects including anger, anxiety, depression, and an increased fear of rape and other crime; and changes in self-perception such as decreased self-esteem and self-confidence (Dansky & Kilpatrick, 1997; Hamilton et al., 1987; Salisbury et al., 1986). I was able to locate only two published studies that examined the statistical relationship between sexual harassment and health among children (Bagley et al., 1997; McMaster, Connolly, Peplar, & Craig, 1998), although sexual harassment was not the primary focus of the former study.
Findings from both studies found a positive relationship between sexual harassment experiences and mental health problems. These findings are supported by some of the adolescent surveys cited earlier (AAUW, 1993; Stein et al., 1993; Trigg & Wittenstrom, 1996) and other qualitative research by June Larkin (1994; see also Halson, 1989), although emotional effects were not measured in a scientifically rigorous manner.

A search of the literature did not locate any published, systematic studies of physical health outcomes for adult or adolescent victims of sexual harassment. However, as for psychological outcomes, adult self-identified harassment victims report a variety of somatic complaints including headaches, fatigue, sleep disturbances, gastrointestinal disorders, weight fluctuations, back pain, jaw tightness, and other muscular tension (Dansky & Kilpatrick, 1997; Loy & Stewart, 1984; Salisbury et al., 1986). There have also been reports of increases in the frequency of respiratory and urinary tract infections (Gosselin, as cited in Charney & Russell, 1994; Loy & Stewart).

The Stress-Health Relationship. Further evidence of the harmful effects of sexual harassment may be abstracted from the stress and coping literature. Despite some inconsistent findings and the challenges in establishing definitive causal relations, investigation into stress-health relationships has yielded provocative results for a wide range of health effects including immune system functioning, infectious disease, the course of chronic disease, and somatic complaints (Barr, Boyce, & Zeltzer, 1996). Research has also demonstrated significant relationships between stress and health-risk behaviours such as tobacco or alcohol use (e.g., Wills & Filer, 1996), although the relationship to health-protective behaviours has been less well-tested and remains uncertain. If sexual harassment does have similar behavioural effects, adolescents may be at particular risk for developing harmful long-term lifestyle patterns due to
their critical stage of development. Furthermore, female adolescent victims may be at increased risk for eating disorders as the unwelcome comments and behaviours push those who are already acutely conscious of their physical appearance to become dangerously obsessed with body weight and shape (Larkin, Rice, & Russell, 1996).

Psychosocial stressors are generally categorized as either acute life events, daily hassles, or chronic strains; and although the effects of magnitude and chronicity are not yet well understood. Nonetheless, what is particularly relevant to the study of sexual harassment is that each type of stress has been found to be predictive of somatic and mental health complaints (Aldwin, 1994; DeLongis, Folkman, & Lazarus, 1988; Thoits, 1995). Thus, the construction of sexual harassment as including a wide range of offensive behaviours from the more serious single incidents (i.e., some form of sexual imposition or assault) to the less offensive, but much more frequent behaviours (e.g., unwelcome sexual references or gestures) is congruent with the theoretical approaches and empirical findings of other stress research.

**Indirect Health Effects Through Educational Outcomes.** Sexual harassment may also affect health indirectly. Studies of sexual harassment among adolescents provide compelling evidence of serious educational consequences including attention difficulties, decreased class participation, and absenteeism (AAUW, 1993; Larkin, 1994). According to Strauss (1993) such reactions and avoidance behaviours on the part of the victims “may result in lost education opportunities, which in turn decreases career options and economic potential” (p. 31). Given the well demonstrated relationship between socioeconomic factors and health (Health Canada, 1999a), this presents yet another potential pathway for negative health outcomes, with particularly long-term implications.

Secondly, and yet perhaps this is the most critical issue, is the possibility that peer sexual
harassment among adolescents may contribute to further sexual and physical violence in future intimate relationships. Because high schools play such an important role in gender socialization, Stein (1993) and others have argued that, if sexual harassment is left unchecked, the schools may function as training grounds for violence where girls “are trained to accept battering and assault ....” and boys “receive permission, even training to become batterers” (Stein, 1995, p. 148; see also Jones, 1985; Larkin, 1994).

**Adolescent Health**

Adolescent health has become an increasingly important target for health care researchers, health promotion practitioners, and clinical psychologists (Millstein, 1993; Millstein & Litt, 1990; Raphael, 1996). Although mortality and morbidity rates may be relatively low for adolescents when compared with other age groups, the health status of the current cohort of adolescents has declined when compared with that of previous generations (Raphael). Furthermore, even though mortality and morbidity rates may be low, Millstein and Litt (1990) caution us that these measures may still “overestimate the health of the adolescent population ... [because the measures used] ... "restrict us to estimating the prevalence of treated conditions” (p. 432) and fail to consider behavioural sources of longer term morbidity. Also critical to a discussion of adolescent health are the significant gender differences, with adolescent girls being more likely to report both physical health problems and depressive symptoms than adolescent boys (Dubow, Lovko, & Kausch, 1990; Millstein, 1993).

Adolescents engage in many activities and behaviours that are associated with poor health outcomes (CICH, 2000; Gillis, 1996; Guthrie, Loveland-Cherry, Frey, & Dielman, 1994; Jessor, 1991; McCreary, 1993). These behaviours, which Jessor describes as risk-behaviours, include the use of tobacco, alcohol and drugs; driving after drinking; sexual risk taking; and disordered
eating. Guthrie et al. note that because adolescence is such a critical developmental period, these behaviours may have a long-term impact on both health outcomes and health-related lifestyle. Substance use among adolescents is of concern because early onset has been shown to be predictive of later substance abuse problems (Kandel & Logan as cited in Thomas & Schandler, 1996) and because of its correlation with other problem behaviours (Donovan, Jessor, & Costa, 1988; Elliott, 1993; Jessor, 1991; McCreary, 1993). No research has been found which sought to identify whether changes have occurred in the high-risk health behaviours of adolescents subsequent to sexual harassment.

Various studies have demonstrated successively increasing rates of depressive disorders among adolescents, especially among females, and a lowering of the age of onset since the turn of the century (Diekstra, 1995; Gore, Aseltine, & Colten, 1993). The rate of suicide among adolescents has also increased significantly; in Canada, suicide is the second leading cause of mortality for adolescents. Also, although the suicide rate for females is one-fourth to one-sixth the rate of males, adolescent females have been found to make significantly more suicide attempts than their male counterparts (Hodgman & McAnarney, 1992; McCreary, 1999; Statistics Canada, as cited in CICH, 1994).

Summary of the Research Problem

The sexual harassment literature, although limited, suggests that that school-based peer sexual harassment is a significant stressor on the lives of adolescents, and of adolescent females in particular. Sexual harassment is defined to include a wide range of unwelcome sexually-oriented and gender-offensive behaviours that contribute to a hostile environment and may extend to physical or sexual abuse. There has been little scientifically rigorous investigation of the health effects of sexual harassment within the adult population and even less with the
adolescent population. Nonetheless, the data that do exist suggest that sexual harassment poses a significant threat to women’s health and well-being both directly and indirectly.

The stress and coping literature offers additional support for the hypothesis that sexual harassment may adversely affect young women’s physical and psychological health, and their health-related behaviours. Adolescents may be at particular risk for developing harmful long-term lifestyle patterns due to their development stage. Unchecked sexual harassment in the schools may also contribute to future victimization within intimate relationships due to the gender socialization that occurs within the school environment during this particular phase of life.

There have been few survey studies conducted in Canada to determine the prevalence, incidence, or severity of sexual harassment among adolescents, and, prior to the present study, none that have addressed its effects on physical health or health-related behaviours. Thus, the present study, which examined the relationship between sexual harassment, health outcomes, and health-related behaviours was timely and important within the field of adolescent health.

**Research Purpose**

The primary purpose of this study was to investigate the relationships between school-based peer sexual harassment and health outcomes among adolescent females. The study tested a model derived from transactional stress and coping theory (Lazarus & Folkman, 1984) which asserts that physical and psychological health problems are related to people’s experience and appraisal of environmental stressors, mediated by their coping responses. The study also investigated the health effects of other school-related stressors (i.e., students’ concerns about academic matters), which permitted an examination of the effects of sexual harassment within a framework that included other potentially confounding school-based stressors. The health
outcomes in this study included physical health complaints, disruptions to psychological health, and health-related behaviours, both health-risk and health-protective behaviours. Because I had originally conceptualized sexual harassment as part of the continuum of violence against women, I focussed the analysis of health effects on adolescent females only. However, in order to expand our understanding of the experiences of peer sexual harassment among adolescents, a sub-objective of the study was to describe and compare the incidence and appraisal of sexual harassment by gender. Thus, the population targeted by this study included both male and female adolescents. The hypothesized model and the underlying theoretical perspective to this study are presented in Chapter 3 following a more comprehensive review and discussion of the literature.

Significance of the Study

Expanding definitions of health are challenging nurses, especially those concerned with community or school health (Broering, 1993). No longer is it adequate to focus on immunization schedules, medication protocols, or vision and hearing screening to the exclusion of a concern for mental health, social health, or psychosocial barriers to learning. In addition, nursing has broadened its view of the environment to look beyond the individual to the sociopolitical context (Butterfield, 1990). Correspondingly, over the last decade, the approach to nursing interventions and health promotion activities has moved beyond a reliance on strategies focussed on the individual to an approach that incorporates the socioenvironmental determinants of health (Hamilton & Bhatti, 1996; Keller, Strohschein, Lia-Hoagberg, & Schaffer, 1998; O'Neill, 1997; Robertson & Minkler, 1994). These changes render it appropriate that community/school health nurses be concerned with social problems and other stressors that may underlay their clients' somatic complaints or health-compromising behaviours and with the social construction of gender and gender-related behaviours that may influence the health of adolescents.
An increased understanding of the health-related sequelae of sexual harassment should enhance the sensitivity of school staff and administrators to these harmful student behaviours and provide a basis for policy development and prevention efforts related to sexual harassment (Dansky & Kilpatrick, 1997). Also, as Berline (1992) commented, “numbers are central to developing a societal response to a social problem. Establishing the frequency of the problem has everything to do with how seriously it is taken, with understanding its causes, and with the allocation of resources” (p. 121). It is by recognizing the incidence and serious consequences of peer sexual harassment that we can influence prevention efforts and provide more appropriate interventions to its adolescent victims.

Definition of Terms

Adolescence

Adolescence may be conceived of as “a physiological, psychological, and sociocultural phenomena …. marked by rapid and dramatic transitions in psychological abilities, social roles, physical structure, and physiological functions” (Thomas & Schandler, 1996, p. 2). For the purposes of this study, adolescence and stages of adolescence were defined according to chronological age. Adolescence refers roughly to the period between 11 and 21 years (Crockett & Petersen, 1993; Strauss & Clarke, 1996; Thomas & Schandler). Mid-adolescence refers to the period between 14 and 17 years, a period that is dominated by peer orientation (Crockett & Petersen; Strauss & Clarke). Note that due to the difficulty of determining precisely when children become adults, the terms girls, adolescent females, and young women will be used interchangeably to refer to females in the mid-adolescent period, with corresponding terms used for adolescent males.
Health Outcomes

Health is claimed to be the central concept in nursing and yet there has been extreme diversity in its conceptualization and measurement (Meleis, 1990; Thorne et al., 1998). In the past, nurses commonly defined health in terms of the absence of disease, role performance, adaptation to the environment, or general well-being and self-actualization (Smith, 1981). Perhaps the only generalization that can be safely made today is to acknowledge a trend toward multidimensional conceptualizations of health. Therefore, within this study, health outcomes included physical health, psychological health, and health-related behaviours. *Physical health* was constructed to reflect the experience of the individual and was measured in terms of somatic complaints. *Psychological health* was measured in terms of depressive symptoms and perceptions of self-worth. *Health behaviours* were constructed to include both health-compromising and health-promoting behaviours.

Sexual Harassment

For the purpose of this study, sexual harassment was defined as unwelcome sexual attention or non-sexual but gender-offensive behaviours that contribute to a hostile or abusive environment. Sexual harassment includes a wide range of physical and verbal behaviours that extend from sexual comments and gestures to more traumatic singular events that may include physical or sexual assault. *Peer sexual harassment* refers to the harassment that occurs between peers or colleagues where there is no power differential other than gender. Harassment between students is peer harassment. Adult harassment of students (e.g., by a teacher or other school staff member) was not the subject of this study.
Stress

Conceptualizations of stress have changed over time; stress has been conceived of as a stimulus, a biological response, and a transactional process (Kasl, 1996). For the purpose of this study, stress was defined as a transaction between the person and environment that is appraised by the individual as threatening to his or her well-being (Lazarus & Folkman, 1984).

Microstressor or daily hassle refers to the frequently occurring events that irritate or upset, and require some cognitive or behavioural adjustment (Compas, Davis, Forsythe, & Wagner, 1987; Lazarus, Delongis, Folkman, & Gruen, 1985). The school-based microstressors in this study were constructed to include concerns about academic or extracurricular matters and relationships with teaching staff, exclusive of sexual harassment.

Overview of the Report

This chapter provided the background to the present study with an introduction to the research problem, the research purpose, and the significance of the research. Chapter Two follows with a summary of the literature pertaining to sexual harassment among adolescents, the status of adolescent health, and the experience of stress among adolescents. Chapter Three presents the causal model that was tested and the theoretical framework underlying the model. Chapter Four describes the design of the study, the sample, and the data collection and analysis procedures. There are two chapters describing the results of the study: Chapter Five focusses on results from descriptive statistical analysis, whereas Chapter Six addresses the structural equation modelling procedures and results. A discussion of the findings and concluding comments are presented in Chapter Seven.
CHAPTER 2 - LITERATURE REVIEW

This literature review is presented in four sections. The research literature related to peer sexual harassment among adolescents is discussed first, followed by a discussion of the health consequences of sexual harassment. The third section discusses the research findings related to adolescent health. The fourth section addresses stress in adolescence and the relationships between stress and health.

Peer Sexual Harassment Among Adolescents

Studies on sexual harassment among adolescents only recently emerged in the literature (e.g., AAUW, 1993; Fineran & Bennett, 1999; McBride, 1998; Shakeshaft et al., 1995; Trigg & Wittenstrom, 1996). Peer sexual harassment is now understood to be a not infrequent occurrence, although it appears to still be considered normal and inconsequential adolescent behaviour by some (Berman et al., 2000; Stein et al., 1993). Another possible reason for the late emergence of research may be the difficulty in obtaining approval to administer potentially sensitive questionnaires to minors. Because of their experience with the latter, Houston and Hwang (1996) and White (1997) conducted retrospective studies of university/college students asking about their experiences in high school. Collinsworth (1997), who also reported difficulties in accessing a student sample, suggested that secondary schools may not want sexual harassment to be uncovered for fear of lawsuits for “maintaining a sexually hostile environment” (p. 4). This review of the literature begins with the survey research, then addresses qualitative studies.

Surveys of Adolescent Sexual Harassment

The first study that addressed peer-to-peer sexual harassment in secondary schools was conducted in 1980-1981 by Nan Stein for the Massachusetts Department of Education. This
pioneering study is relatively unknown, but the results of the study are briefly described in Linn, Stein, Young, and Davis (1992). The Massachusetts study included a survey and in-depth interviews in both comprehensive and vocational secondary schools, and the key results were as follows: (1) girls were more likely to be victims of peer sexual harassment than boys, especially of the more severe forms; (2) sexual harassment from other students was much more prevalent than harassment from teachers, and (3) students experienced a wide range of consequences from the harassment, including fear, loss of self-confidence, physical symptoms including insomnia and listlessness, and a reduced ability to perform schoolwork. The harassment led to altered school behaviours for some students, including excessive absenteeism and tardiness, transfer from courses, and withdraw from school.

The results of the 1981 Stein study are similar to those found in subsequent published studies (AAUW, 1993; Fineran & Bennett, 1999; OSSTF, 1995; Stein et al., 1993; Trigg & Wittenstrom, 1996) which will be described in more detail below. In reviewing these studies, methodological problems characterizing many sexual harassment studies will be used as points of foci.

**Sampling Bias.** The relatively new field of adolescent sexual harassment research has not yet generated critiques of its methodology. However, critiques of the more plentiful studies investigating sexual harassment in workplace and university settings can serve as useful guides. Arvey and Cavanaugh (1995) criticized many sexual harassment studies for establishing incidence and prevalence rates based on nonrandom convenience samples and then overgeneralizing those rates to other populations. Identifying sexual harassment as the research topic of interest, coupled with convenience sampling, can result in an over-recruitment of subjects who have experienced harassment, thus leading to inflated prevalence estimates for
larger populations. However, Vaux (1993) noted that sample selection bias can also result in underreporting because some victims of harassment may not wish to be reminded of their unpleasant experiences by filling out a questionnaire.

The sample selection bias criticism is valid for the study by Stein et al. (1993). This mail-in survey was conducted by the Wellesley College Center for Research on Women through Seventeen magazine. Readers were invited to return a survey on school sexual harassment included in a 1992 issue of the magazine, with 4,200 females ages 9 to 19 years responding. Although such a large sample size resulted in the collection of a tremendous amount of data, conclusions based on the data must be considered tentative because of the possible existence of sample selection bias. For example, the authors concluded that peer sexual harassment peaks among the 13 to 16 years of age group, yet it must be kept in mind that the readership of Seventeen consists primarily of that same age group.

The same criticism is much less valid for the Hostile Hallways study commissioned by the American Association of University Women (AAUW, 1993). The AAUW study was the largest and most scientifically rigorous of the sexual harassment studies among adolescents which drew on a stratified and ethnically representative sample of 1600 students in grades 8 through 11 in 79 schools across the United States. In a more recent study of 700 New Jersey high school students that targeted a non-random sample of 30 schools (Trigg & Wittenstrom, 1996), the school response rate was only 30% with the resultant sample over-representing the state’s racial diversity and the middle-class strata, but under-representing eight-graders. Studies by Fineran and Bennett (1999) and the Ontario Secondary School Teacher’s Federation (OSSTF, 1995) were similarly based on non-probability samples (with N = 342 and 264, respectively), although sites in the OSSTF study were selected to reflect student diversity in Ontario.
Collinsworth (1997) also used a convenience sample which consisted of the entire senior class at one school in a small Midwestern town. Despite this variation in sampling methodologies, these studies yielded a remarkable convergence of findings, as will subsequently be shown.

**Validity and Reliability of Measurement.** Arvey and Cavanaugh (1995) criticized sexual harassment research for paying little attention to the psychometric features of sexual harassment survey instruments. In particular, they noted that the reliability of retrospective reports of sexual harassment has not been determined. Fitzgerald (1990) contends that content validity is the most relevant form of validity for sexual harassment research, and is critical of many sexual harassment studies for undersampling from the gender harassment domain. Gruber (1990) has similarly argued that research needs to capture “full spectrum of harassment” (p. 461).

Measuring sexual harassment is complicated by definitional issues and the sheer prevalence of the problem. Research findings suggest that, unless there has been some physical assault or threat, women do not label their experiences as sexual harassment despite feelings of distress and the fact that the behaviour experienced meets the legal definition (Fitzgerald, 1990; Fitzgerald & Shullman, 1993; Paludi, 1997). In their investigation into students’ own definitions of sexual harassment, Loredo, Reid, and Deaux (1995) found that some students define acts as sexual harassment only in the case of quid pro quo harassment (in which the harasser holds out a promise of reward or a threat of retaliation in return for sexual favors). As a result of lay confusion over definitions of sexual harassment, it has been recommended that survey items be written in behavioural language and in sufficient detail to ensure that all respondents interpret the items in the same manner (Arvey & Cavanaugh, 1995).

For the most part, the peer sexual harassment studies reviewed here do not suffer from vaguely worded items. In the AAUW (1993) study, sexual harassment was defined in the
questionnaire as: “Unwanted and unwelcome sexual behaviour which interferes with your life. Sexual harassment is not behaviours that you like or want (for example: wanted kissing, touching, or flirting).” Although sexual harassment was defined, respondents were not asked to apply the harassment label to the behaviours under consideration. The AAUW questionnaire was worded in behavioural terms, and the students were specifically asked, “During your whole school life, how often, if at all, has anyone . . . done the following things to you when you did not want them to?” (p. 5). This was followed by a list of 14 specific behaviours. A number of other studies, in both Canada and the US, have used slightly modified versions of the AAUW questionnaire for studies of harassment at the high school (Fineran & Bennett, 1999; OSSTF, 1995; PCSW, 1995; Trigg & Wittenstrom, 1996) and middle school levels (McMaster et al., 2000). Collinsworth (1997) based her questionnaire on the survey instrument developed by Fitzgerald and her colleagues (Fitzgerald et al., 1988), and the items were written in explicit, behavioural terms. The questionnaire used in the Seventeen study (Stein et al., 1993) also provided behavioural descriptions of the seven types of harassment about which the respondents were queried.

There is one piece of survey research regarding sexual harassment among adolescents that is guilty of unclear terminology. Bagley et al.’s (1997) study, which will be discussed later in the section on health outcomes, included three items on sexual harassment/assault but failed to clearly define sexual harassment and assault. This may have occurred because the survey focussed on substance abuse rather than sexual harassment/assault. Nonetheless, the harassment results are of questionable validity due to the wording of the items.

Other Ambiguity in Wording. Pryor and McKinney (1995) noted the need for “a standard measure of sexual harassment that is used across different surveys” (p. 607). Incidence
estimates can vary because of differing language used in the different studies. In the AAUW (1993) study, respondents were presented with five choices for reporting frequency: often, occasionally, rarely, never, and not sure. The ambiguity of the term “often” points to the need to gather more precise frequency data when surveying adolescents about sexual harassment victimization. The use of more precise language is found in the studies by Stein et al. (1993) and Fineran and Bennett (1999) which gathered frequency data by asking respondents to report how often the behaviours occurred using a 5-point scale ranging from never to every day.

The Use of Retrospective Self-Report Measures. Surveys asking about sexual harassment vary considerably in the time period that respondents are asked to report upon. The AAUW (1993) researchers asked students to report on harassment experiences experienced at any time in the respondent's “whole school life.” Other studies have asked about the whole school year (Fineran & Bennett, 1999; OSSTF, 1995; Stein et al., 1993). Published reports of other studies provided no details about the recall period (Collinsworth, 1997; Roscoe, Strouse, & Goodwin, 1994; Trigg & Wittenstrom, 1996).

Arvey and Cavanaugh (1995) noted two possible problems when survey items pertain to lengthy time periods. First, asking respondents to report on events that occurred long ago introduces the potential problem of memory distortion. Secondly, even if events are accurately recalled, they may be perceived and reported differently at separate points in time. The acuity of the experience could be ameliorated by the passage of time; or, conversely, the stress of an experience could conceivably be perceived to be greater than first thought after time has passed and self-reflection has occurred.
Comparing Survey Results

Prevalence. The AAUW (1993) study was the most scientifically rigorous, and therefore, the results should be the most valid. After a description of the AAUW results, the other adolescent surveys will be examined for supporting evidence. In the AAUW study, 85% of female students report being victimized by sexual harassment. Although the incidence of sexual harassment is less clearly defined, 31% of female students report being “often” the target of sexual harassment in school. The most common type of harassment reported is sexual comments, jokes, gestures, and looks. However, 65% of girls have been touched, grabbed, or pinched in a sexual way and 13% of girls have been forced to do something sexual other than kissing. Similar figures for overall prevalence were found by Trigg and Wittenstrom (1996) and Fineran and Bennett (1999); 87% of the female respondents in each study reported being victimized by sexual harassment at least once in school. The OSSTF (1995) study, which was also based on the AAUW instrument, obtained a slightly lower rate of 83%.

Although prevalence rates found in the Seventeen survey (Stein et al., 1993) must be interpreted with caution, the percentages of girls (n = 4200, ages 9 to 19 years) reporting specific types of harassment experiences is fairly congruent with the AAUW (1993) and Trigg and Wittenstrom (1996) studies. As in the other studies, suggestive gestures, looks, comments, and jokes were the most common form of harassment reported (89%), and the second most common being reports of being touched, pinched or grabbed (83%). One particularly significant finding of the Seventeen study were that 39% of the girls and young women reported being harassed at school on a daily basis throughout the prior year.

Further corroboration of the AAUW (1993) findings come from Collinsonwr’s (1997) study, which found victimization rates of 92% among the female students. Because
Collinsworth's sample was much smaller (n = 240) and came from a single high school, prevalence rates may be particular to the participating school; however, an unpublished study by the Permanent Commission on the Status of Women in Connecticut (PCSW, 1995) also found that 92% of female students reported having been sexually harassed. In the Collinsworth study, a slightly larger percentage (92%) of females reported that they had experienced sexually harassing behaviour than in the AAUW study (85%). One possible reason for this difference is that the Collinsworth study included more items from the gender harassment domain of sexual harassment (e.g., made dirty remarks about your gender). Gender harassment has been found to be the most common form in studies investigating sexual harassment in workplace and university settings (Schneider et al., 1997).

**Who Harasses?** The findings from survey studies of school-based sexual harassment consistently indicate that by far, the largest proportion of the harassment comes from other students rather than teachers or other staff. In the AAUW (1993) study, 86% of the harassment victims reported that the harassment came from other students, whereas 25% reported being harassed by school staff. Stein et al. (1993) also found that students were most often harassed by fellow students, with only 4% reporting being harassed by teachers or other school staff. This same pattern of results was also found in the Strauss (1988) and Collinsworth (1997) studies, although the percentage of students who were harassed by school staff was larger than in the other studies (30% and 50%, respectively).

**Where Does the Harassment Take Place?** The large majority of the sexual harassment reported in the studies occurred in public parts of the school within view of others, with classrooms and hallways the most common places of occurrence. The AAUW (1993) respondents reported experiencing harassment in the hallway (73%), in the classroom (65%), on
school grounds (48%), and in the cafeteria (34%). These figures are generally echoed in the
other studies. Stein et al. (1993) found that 94% experienced harassment in the classroom and
76% in the halls, and Strauss (1988) found that 71% experienced harassment in classes and 67%
in halls. With the majority of harassment being experienced in public places, it is no wonder that
Stein (1995) refers to sexual harassment in schools as “the public performance of gendered
violence” (p. 145).

Peer sexual harassment happens in all kinds of schools, according to the studies
examined here. Although the AAUW (1993) study only surveyed students in public schools,
Stein et al. (1993) obtained responses from students attending public, private, parochial, and
vocational schools. Although most of the studies to date have been American, the survey by the
OSSTF (1995) and qualitative studies by Larkin (1994) and Morrissey (1995) indicate that
Canadian schools are not immune to the problem. Moreover, sexual harassment is found within
Canadian elementary and middle schools (Berman et al., 2000; McMaster et al., 1997, 1998,
2000).

*When Does Harassment Start?*

The humiliation of sexual harassment starts early .... Complaints about primary
girls being called “sluts” and “bitches” by their male classmates are pretty
standard. Often, the abuse escalates. One grade 7 girl attempted suicide in a
desperate attempt to avoid facing her male classmates and their relentless
harassment which, over the school year, had been stepped up from ordinary
gendered put-downs to threats of sexual assault. When the principal investigated,
he learned that the same boys had terrorized other female students who had
determined that silence was their best bet for escaping serious harm. (Larkin,
1994, p. 12)

Although most of the studies described so far focussed on students attending secondary
schools, additional data gathered in the high school studies suggested that students in elementary
schools are also experiencing peer sexual harassment, and this has since been corroborated by
studies targeting elementary age students (McMaster et al., 2000; Murnen & Smolak, 2000). Most of the students in the AAUW (1993) study reported that they first experienced sexual harassment during the middle school/junior high years (grades 6 to 9). Of the remaining students, one third reported that their first harassment experiences had occurred before grade 7; six percent reported experiencing sexual harassment before grade 3. Fifteen percent of the respondents in the Trigg and Wittenstrom (1996) study reported that they first experienced sexual harassment in the first to fifth grades. Stein et al. (1993) found that the girls reporting the highest frequencies of occurrence were between the ages of 13 and 16, although the more serious forms of reported harassment and or assault occurred most frequently among young women aged 17 to 19. All three of these studies suggest that sexual harassment starts in the elementary grades and increases in frequency and severity in secondary school.

McMaster et al. (2000) surveyed over 1200 students in grades 6 through 8. Although the focus of the study was developmental trends in the perpetration of cross-gender and same-gender sexual harassment, the findings also included victimization rates of 38% of girls and 42% among boys. The results of Murnen and Smolak’s (2000) study of 73 children in grades 3 through 5 indicated that the majority had experienced some form of sexual harassment, although incidence was infrequent.

**Harassment of Boys.** Vaux (1993) questioned the paradigmatic assumptions which he asserted were guiding sexual harassment research - the beliefs that “men are violent toward women: most women are potential victims, most men, potential perpetrators” (p. 116). Vaux argued that a feminist perspective had led to unnecessary tension between the sexes due to biased research that failed to address the sexual harassment experiences of men. However, this criticism seems much less applicable today, for virtually all survey research into the sexual
harassment experiences of adolescents has targeted male and female students (e.g., AAUW, 1993; Collinsworth, 1997; Fineran & Bennett, 1999; OSSTF, 1995; PCSW, 1995; Trigg & Wittenstrom, 1996).

The present study focussed on the health effects of sexual harassment among adolescent women, but this is not meant to imply that boys and young men are not also harassed or harmed by the harassment. Indeed, prevalence statistics from the AAUW (1993), Trigg and Wittenstrom (1996), Collinsworth (1997), and Fineran and Bennett (1999) studies suggest that almost equal numbers of both sexes have experienced sexual harassment at school, although the incidence rate is far less for boys. According to the AAUW findings, 85% of girls and 76% of boys in grades 8 through 11 have been sexually harassed at least once, but 31% of girls have been harassed “often”, compared to 18% of boys. The OSSTF (1995) and the PCSW (1995) studies, however, yielded considerably lower prevalence rates among males compared with female students (50% and 57%, respectively, compared with 83% and 92% among the females).

Roscoe et al. (1994) surveyed 281 females and 280 males, ages 11 to 16, in one predominantly white Midwestern intermediate school in a study investigating their experiences and their acceptance of sexual harassment behaviours. Fifty percent of the females and almost as many males (37%) reported having been sexually harassed by their peers at least once. Indeed, more males than females reported being the recipient of unwanted telephone calls, letters, and pressure for dates. However, the authors speculated that, in the early to middle years of adolescence, because girls are generally more developmentally ready for dating than are boys, the boys may see female-initiated dating behaviours as intrusive.

Strauss (1988) also included males in her study, but she concluded that little, if any, sexual harassment of males exists. Only one out of the 130 grade 11 and 12 male students who
participated in the study claimed to have experienced harassing behaviours. However, the methodology used in this study could well have produced biased and invalid results. The students filled out their surveys after a 3-hour workshop on sexual harassment, and it is quite possible that the boys were convinced by the workshop that only females could be victims of sexual harassment.

**Emotional Responses to Sexual Harassment.** Although the percentages of students of both sexes experiencing sexual harassment behaviours in most of the survey studies are roughly similar, there is considerable evidence that boys' educational and emotional experiences of harassment are qualitatively different from girls'. Seventy percent of girls in the AAUW (1993) study reported feeling "very" or "somewhat" upset as a consequence of their harassment experiences, as opposed to only 24% of the boys. Similarly, in the New Jersey study 52% of the girls - as compared with only 19% of the boys - reported being very or somewhat upset by the harassment (Trigg & Wittenstrom, 1996). Additional support of the AAUW findings come from Collinsworth (1997), who found that girls reported being twice as upset as boys by peer sexual harassment. Similar gender differences in appraisal have been found in studies of elementary students (Murnen & Smolak, 2000).

The AAUW (1993) study collected more specific data about how the two sexes reacted emotionally to their harassment experiences. While 64% of girls felt embarrassed, only 36% of boys reported feeling this way. More girls (52%) than boys (21%) felt self-conscious, more girls (43%) than boys (14%) felt less self-confident, and far more girls (39%) than boys (8%) felt afraid as a result of peer harassment. Conversely, more boys (16%) than girls (8%) reported feeling more popular after their harassment experiences. Trigg and Wittenstrom (1996) found
that the boys in their study were most disturbed by "behaviours that threatened their masculinity, such as being called homosexual or being sexually harassed by other boys" (p. 59).

**Behavioural Responses to Sexual Harassment.** The gender differential also arises for students' behavioural responses to peer sexual harassment. The most common response for both sexes in the AAUW (1993) study was changing their behaviour to avoid the harasser, but 69% of the girls responded in this manner as compared with 27% of the boys. The next most common response was staying away from particular places in the school or on the school grounds (34% of the girls, 12% of the boys). In addition, 33% of the girls reported not wanting to attend school, as compared to 12% of the boys. And again, more girls (32%) than boys (13%) reported not wanting to talk as much in class after experiencing harassment.

**Adolescents' Perceptions of Sexual Harassment.** One of the challenges identified earlier, with respect to reliable and valid research, is the different perceptions about what constitutes sexual harassment. Although considerable work has been done in this area with regard to perceptions among adult women (e.g., Fitzgerald & Ormerod, 1991; McKinney, 1990), both with respect to definitions of harassment and self-perceptions (identification) of harassment experiences, far less work has been done among the adolescent population. Research findings indicate that adult women, including the older adolescent population of undergraduate students, use a broader definition of sexual harassment than do men; that is, women are less tolerant of certain behaviours or more likely to label situations as harassing. Some evidence has been found to suggest that individual differences in sex role attitudes are related to perceptions of sexual harassment (Malovich & Stake, 1990). Research on perceptions of sexual harassment is important as it may relate to the relationship between sexual harassment behaviours and outcomes.
Only one quantitative study was found that specifically investigated high school students' perceptions and definitions of sexual harassment (Loredo et al., 1995), although there has been qualitative work that explored perceptions of sexual harassment (e.g., Berman et al., 2000; Larkin, 1994; McBride, 1998; Morrissey, 1995). Loredo and colleagues used grade 12 students' responses (N = 73) to eight different vignettes to examine their perceptions of sexual harassment behaviours. The eight vignettes varied in terms of the type of sexual harassment, the status of the perpetrator (teacher or student), and the gender composition of the perpetrator/victim dyad. The vignettes included female-to-male harassment. Consistent with research findings for the adult population, female respondents rated the harassment as more severe and more inappropriate than did the male respondents. Main effects were found for the status of the perpetrator; harassment by teachers was judged to be more severe and more inappropriate than harassment by peers. However, there was also an interaction effect with type of harassment, in that with the less severe forms of harassment, teacher behaviours were judged as being far more inappropriate than the same type of harassment by their peers. Ratings of severity were influenced by the type of harassment, with gender harassment being seen as the least severe form of harassment and sexual bribery and coercion the most severe and most inappropriate. Interestingly, the gender of the perpetrator made no significant difference to the evaluation of the behaviours, although it should be noted that the scenarios were all heterosexual encounters.

Houston and Hwang (1996) asked 80 Canadian female university students to recall teacher-to-student harassment behaviours they may have experienced while in high school. The aim of the study was to compare the students' objective experiences of harassment behaviours with their subjective perceptions of whether or not they had ever been harassed. To assess the
students’ objective experiences of teacher-to-student sexual harassment, the study used the Sexual Experiences Questionnaire (SEQ; Fitzgerald et al., 1988), a 27-item self-report measure. The SEQ lists sexual harassment behaviours and asks subjects to indicate frequency of the experience (never, once, or more than once). To assess the students’ subjective perceptions of their experiences, the students were asked to indicate to what degree they had been sexually harassed by a teacher; the 6-point scale ranged from not at all to a major degree. Consistent with earlier findings by Corbett, Gentry, and Pearson (1993) in their study of university students, Houston and Hwang found a disparity between the high number of objective sexual harassment experiences reported on the SEQ and the labelling of these experiences as sexual harassment. Their results also indicated that the type and severity of the harassment experience influenced its labelling. Students who had experienced gender harassment and/or seductive behaviours were less likely to report being harassed than those who had suffered sexual coercion or sexual assault.

Qualitative Studies of Sexual Harassment Among Adolescents

Qualitative studies are important for understanding the experience of sexual harassment and to assist in the development of valid quantitative measures. Larkin’s (1994) work, Sexual Harassment: High School Girls Speak Out, will no doubt come to be recognized as a classic feminist study into sexual harassment among adolescent females in Canada. In this descriptive study, a diverse sample of 60 young women from four high schools located in urban, rural, and small town settings described sexual harassment experiences perpetrated by male peers and how that harassment affected their education. The participants’ descriptions of the harassment they suffered are consistent with the behaviours included in the AAUW study; however, the explicit detail of the harassment behaviours (e.g., being held down while mock intercourse was acted
out) and the girls' reactions contributes to a far greater understanding of the possible harm of such behaviours to the victims. Berman et al.'s (2000) Ontario-based study of girls aged 11 to 16 years offers a similar description of the everyday, sexualized violence in their lives.

The data in Larkin's (1994) study were collected through participants' journals which detailed the sexual harassment incidents which occurred during one school term, through monthly group discussions, and through interviews with a subsample of students. The emancipatory strength of this action research project is evident from the description of how the young women's perceptions of their harassment experiences changed as they shared common experiences through their group discussions. The young women came to view these behaviours not as something normal or something to be endured, not as something that they were to be blamed for, not as merely inappropriate flirting or joking, but as problematic behaviours that should not be tolerated.

Two qualitative studies from the United Kingdom (UK) demonstrated that school-based peer sexual harassment is or has been equally problematic for UK adolescent girls. Carol Jones (1985) and Jacqui Halson (1989) both used observation and interviews over 9-month periods to investigate adolescent girls' sexual harassment experiences. Both studies found harassment behaviours similar to those identified in Larkin's (1994) Canadian study, and both UK researchers concluded that verbal and physical harassment of school girls is a common occurrence. For example, Halson (1989) described female students “being chased, being grabbed or groped, being pushed to the ground, pinned down or sat upon, [and] being sexually assaulted” (p. 135). Jones also addressed the “public silence” that surrounded the issue of sexual harassment in the schools at that time. She found that sexual harassment tended to be constructed as nonexistent in the school. Participants reported that they felt that they were
“unlikely to be believed or that boys were inadequately punished” (p. 30) and, consequently, the female students and staff did not report many incidents. This, in turn, supported the male administrators’ position that sexual harassment was not a problem in the school.

The qualitative studies described above indicate that a wide range of harassing behaviours are experienced by adolescent females in a variety of school settings. The derogatory name calling, physical harassment, and assaults described in these studies suggest that the behaviours included within survey instruments are not merely annoying or inappropriate behaviours or trivial concerns. Instead, such behaviours contribute to a “humiliating and threatening environment” (Halson, 1989, p. 136), a fear of rape, and a sense of powerlessness among the girls (Berman, 2000; Halson; Larkin; 1994).

The studies by Larkin (1994) and Halson (1989) also reveal the continuum and overlapping links between the various forms of sexual harassment that are experienced by high school girls. For example, the results of both studies indicate that more severe physical harassment is often preceded by leering or verbal sexual harassment. Moreover, Larkin suggests that it is often extremely difficult to distinguish between sexual harassment and sexual assault, given that “in many cases sexual assault is an extreme expression of the various forms of harassing acts” (p. 87).

Two unpublished studies by Morrissey (1995) and McBride (1998) offer important insights into the meaning and significance attributed by adolescents to the peer behaviours that researchers and other adults construe as possible sexual harassment behaviours. Both studies utilized group discussions followed by interviews with a subsample of the participants. The 70 participants in Morrissey’s study were drawn from two Saskatchewan schools, one rural and one urban; the 18 participants in McBride’s study were drawn from two areas of Ohio. Both
researchers found that students did not typically label their peers’ behaviours as sexual harassment, and that they experienced pressure from other students to perceive the harassment as normal adolescent behaviour. Morrissey’s results also indicated that complaining about harassment was risky in that it could lead to further and more severe harassment, and she noted that many students reported feeling discouraged and helpless “to change attitudes and behaviours which seem so deeply embedded in our society” (p. 109).

McBride’s (1998) narrative inquiry into the dynamics and interpretation of peer sexual harassment, however, offers a more insightful, developmental explanation for the complex and challenging pressures faced by adolescents in trying to negotiate personal boundaries and set limits on their peers’ behaviours. McBride notes that two of the very important developmental tasks during adolescence are identity formation and learning how to negotiate cross-gender relationships. Therefore, labelling or confronting their peers’ behaviours as sexual harassment not only threatens the heterosexual, gendered order of their social networks, but may also threaten the adolescent girl’s self-esteem and identity by risking her relationship-building in social, romantic situations.

Summary of the Peer Sexual Harassment Literature

Survey findings from Canada and the US, and qualitative data from UK studies indicate that peer sexual harassment among adolescents is both common and destructive. Although the survey studies are beginning to give a clear estimate of the prevalence rates for sexual harassment in the schools, less information is available about incidence. The studies consistently find that harassment by peers is much more common than harassment by teachers. And although boys are also harassed, little known about the context of the harassment or comparative incidence. However, it cannot be claimed that the statistics cited above or other findings are
universally generalizable. Nonetheless, research throughout the industrialized world does suggest that sexual harassment in the workplace is a widespread problem spanning many different countries and cultures, although the forms of harassment may vary according to culture and behavioural standards, just as forms of family violence vary across cultures (Barak, 1997, p. 275).

The qualitative studies confirm and describe in much more graphic detail the "gendered terrorism" (Stein, 1992) that is suggested by quantitative studies. The evidence from both research paradigms also converge to show that sexual harassment is a public phenomenon – in classes, hallways, the cafeteria – in the school environment which is legally and morally responsible for providing a safe and nondiscriminatory educational environment for young people.

**Health Outcomes of Sexual Harassment**

Research into the health consequences of sexual harassment among adolescents is in a very nascent stage, although outcomes research with adult victims is not much more advanced. Much of the evidence about the effects of sexual harassment in the workplace was garnered through the self-reports of people who identified themselves as having been harassed or the case studies reported by health care professionals. Thus, much of the past evidence was "primarily descriptive and anecdotal" (Lenhart, 1996, p. 28), or subject to confounding factors and biases (Dansky & Kilpatrick, 1997; Gutek & Koss, 1993; Schneider et al., 1997. For example, in Loy and Stewart's (1984) telephone survey of workplace harassment, women who identified themselves as victims of workplace harassment were asked about the emotional and physical symptoms that they experienced "due to their harassment" (p. 37). This is similar to the design used in the United States Merit Systems Protection Board study of over 8,000 federal employees
which asked self-identified victims to indicate whether their emotional or physical condition "became worse, had no effect, or became better" in response to the harassment (as cited in Thacker & Gohman, 1996, p. 434). It is only since the mid-1990s that more rigorously conducted outcome studies have begun to be reported in the literature, particularly by researchers such as Fitzgerald and her colleagues (e.g., studies by Schneider et al., 1997; and Fitzgerald, Drasgow, Hulin, Gelfand, & Magley, 1997), and Dansky and Kilpatrick (1997). Rather than asking self-identified victims of harassment to report the outcomes of their experiences, these studies were correlational in design, and their results provide support for the notion that sexual harassment in the workplace is detrimental to women's health. Almost nothing is known about the potential effects of sexual harassment on men's health.

The Conceptualization of Effects

The outcomes of sexual harassment are generally conceptualized in terms of (1) emotional or psychological effects, (2) physical health effects, and (3) study or work related effects (e.g., Gutek & Koss, 1993; Schneider & Swan, 1994). Given the legal and economic interests in workplace harassment, it is not surprising that the latter has received the most research attention (Lenhart, 1996). A Sexual Harassment Trauma Syndrome (as cited in Woody & Perry, 1993) has also been identified; effects are categorized as emotional reactions, physical reactions, change in self-perception, social and/or sexual effects, and career or education effects. However, what is typically not conceptualized as an outcome of harassment is equally interesting. Although stress and coping theory has been invoked within the sexual harassment literature and research (e.g., Dansky & Kilpatrick, 1997; Schneider et al., 1997; Swan, 1996), outcomes research generally fails to include health-related behaviours (e.g., substance use) as an outcome category or as even as a coping strategy. Lenhart's (1996) work is an exception to this,
as she includes “problematic coping responses” (p. 29) as a category of negative sequelae to sexual harassment. Physical health effects are also poorly addressed.

Sexual harassment is often conceptualized as “part of a spectrum of gender-based abuses that all involve exploitation and physical or sexualized violence” (Gutek & Koss, 1993, p. 30). In their account of therapeutic experiences with sexual harassment victims, Salisbury et al. (1986) note many commonalities between the reactions of sexual harassment victims and the reactions of women who have been victims of rape, battering, or incest. Similarly, Hamilton et al. (1987) employ a victimization model and the concept of post-traumatic stress to explain the effects of workplace harassment and its similarities to other gender-based trauma.

Workplace Harassment Health Effects

The physical health effects of workplace harassment have been reported by various authors based on their experiences in providing counselling to victims of sexual harassment (e.g., Hamilton et al., 1987; Salisbury et al., 1986; Woody & Perry, 1993) and other research findings. Charney and Russell (1994) and Lenhart (1996) summarized the following as physical health sequelae of harassment: headaches, dizziness, nausea, diarrhea, loss of appetite, weight loss, muscle spasms, teeth grinding, tiredness, eczema, urticaria, sleep disruption, delayed recovery from illness, increased frequency of respiratory and urinary tract infections, recurrence of chronic illness, ulcers, and irritable bowel syndrome. As will be discussed later, considerable evidence has emerged from the stress-health research literature that demonstrates physiological linkages between psychosocial stress and structural and functional changes within the body (Cohen & Williamson, 1991; Fisher, 1996; O’Leary, 1990; Steptoe, 1991; Tsigos & Chrousos, 1996).
Some of the psychological reactions identified by Charney and Russell (1994) and Lenhart (1996) include diminished self-esteem and self-confidence; irritability; mood swings; fear of loss of control; extreme feelings of guilt, shame and rage; decreased concentration; and feelings of helplessness and vulnerability. Charney and Russell suggest that more than 90% of sexual harassment victims suffer psychological or physical symptoms and that 12% seek professional assistance. These statistics may be overstated given the paucity of more scientifically rigorous investigations into the effects of sexual harassment (Dansky & Kilpatrick, 1997). Certainly, such figures lack specificity with regards to the relationship between different types or levels of sexual harassment and symptom severity. Lenhart also identifies binge eating as an outcome of harassment, a behaviour which might also be conceptualized as a coping strategy.

Among the more rigorous, population-based studies, and using a national probability sample of over 3,000 women, Dansky and Kilpatrick (1997) demonstrated that the respondents who met the diagnostic criteria for post-traumatic stress disorder or clinical depression were significantly more likely to report having experienced sexual harassment, even after other factors were accounted for. Schneider and colleagues (1997) were similarly able to discriminate between groups of women who had, and had not been harassed, on the basis of their psychological status. Of particularly significance, the latter study demonstrates that when frequent or chronic, even the less severe forms of harassment can have serious emotional consequences. The dissertation work by Swan (1996) and the study by Fitzgerald, Drasgow, et al. (1997) both employed structural equation modelling techniques. No similar work has been found with regard to physical health effects for adult or adolescent victims of sexual harassment.
Health Outcomes Among Adolescents

A search of the literature located only one systematic investigation into the health effects of sexual harassment among youth. Using a sample of Ontario youth in grades 5 through 8, McMaster et al. (1998) demonstrated that those who had experienced sexual harassment from their peers were more likely to suffer clinically significant levels of internalizing and externalizing mental health symptoms. However, results of the adolescent surveys cited earlier (AAUW, 1993; Stein et al., 1993; Trigg & Wittenstrom, 1996), and the qualitative research by Larkin (1994) in Canada and Halson (1989) in the UK, are congruent with the psychological outcomes reported for workplace harassment. The studies uncovered a range of emotional effects including anxiety, depression, and an increased fear of rape and other crime; and changes in self-perception such as decreased self-esteem and self-confidence. In each of these studies, participants were asked to report on their harassment experiences and the impact of that harassment. However, the focus was on psychological and educational outcomes to the virtual exclusion of physical health effects.

Psychological effects. In the AAUW study, 43% of the girls who had experienced harassment reported feeling less confident about themselves (compared with 14% of the boys), and 39% reported feeling afraid or scared (compared with 8% of the boys). Twenty-five percent of the girls also reported that the harassment left them feeling “confused about who they are” (p.17). Both Carol Gilligan (1991) and Mary Pipher (1994) have suggested that female adolescence is a time of psychological crisis with respect to girls’ identity, self image, and self-esteem, which Pipher partially attributes to our “girl poisoning culture” (p. 12). Sexual harassment is part of that culture.
The qualitative data obtained by Larkin (1994) and Halson (1989) provide a more emotionally engaging portrayal of the psychological consequences of harassment than that provided by mere numbers. There is also some qualitative data available from the New Jersey study (Trigg & Wittenstrom, 1996) in which respondents were asked to describe how they felt immediately after being harassed. The voices of the young women convey well the damage caused by sexual harassment. “I felt degraded or useless. I felt like I didn’t matter” (Trigg & Wittenstrom, p. 57, a ninth-grade girl). “I felt like something was taken away from me. I felt dirty and responsible” (p. 57, eleventh-grade girl). “I felt like killing myself because it was very disgusting” (p. 57, eleventh-grade girl). One young woman in Larkin’s study described her response as, “I feel bad about my body and I wish that I was a boy” (p. 109).

Larkin (1994) reports that the high school girls’ most common reaction was fear, a fear that is linked to the uncertainty of not knowing when the harassment might escalate to more serious violence. Other anecdotal evidence (Stein et al, 1993) suggests that the stress experienced by sexual harassment victims increases when schools fail to address the issue.

In an analysis of data drawn from a larger study on substance use (i.e., the Alberta Youth and Family Lifestyle Survey), Bagley et al. (1997) demonstrated significant positive relationships between high levels of sexual assault and harassment and emotional disorders and suicidal behaviours among adolescent girls in grades 7 through 12 (N = 1,025). Bagley and colleagues noted that the sexual harassment of males was also investigated, but the rates were found to be lower, and the relationships with mental health problems were much weaker. However, the reliability and validity of the sexual harassment measure is questionable because it was not based on a representative set of items as recommended by Fitzgerald (1990). Rather, the measure of sexual harassment was compiled through a content analysis of responses to the third
item in the following series: “While at school ...(a) has someone exposed themselves to you? (b) has someone touched private parts of your body when you didn’t want them to? (c) has someone done anything else you didn’t want them to? (please specify)” In contrast to other studies among adolescents, the vast majority of respondents (86%) reported no harassment, and this study adds little to our knowledge of sexual harassment among adolescence.

**Gender Differences.** Findings from the AAUW (1993) study and the New Jersey study (Trigg & Wittenstrom, 1996) strongly suggest that the emotional (and educational) consequences of harassment are qualitatively different for boys as compared with girls. For example, in the AAUW study, a much lower percentage of the boys who were harassed report avoiding the person who harassed them (27% compared with 69% of the girls) or not wanting to go to school (12% compared with 33% of the girls). Other differences were noted above with respect to diminished self-confidence and feelings of fear. In the New Jersey study, 52% of the girls, but only 19% of the boys reported being very or somewhat upset by the harassment.

In their re-analysis of the AAUW data, Hand and Sanchez (2000) emphasized the experience of physically invasive forms of sexual harassment as an explanation for gender differences in harassment outcomes. They argued that girls experience more detrimental outcomes not merely because they experience harassment more frequently than boys, but largely because they are targeted with physical forms of sexual harassment more often than boys and because they perceive that physical harassment as more harmful or upsetting than do boys. However, it was a measure of *anticipatory* appraisal that formed the basis of that analysis; moreover, derogatory comments and physical harassment behaviours were rated by the girls as almost equivalent in harmfulness, and the majority of physical harassment behaviours were experienced no more frequently than some of the other forms of harassment (i.e., derogatory
comments and visual/verbal harassment). This suggests that we should not neglect gender harassment behaviours when investigating the health outcomes of sexual harassment.

**Indirect Health Effects**

*Educational Effects.* Research has revealed the high cost of sexual harassment on the educational lives of adolescents, an effect that may be linked to long-term health outcomes. The distress arising from the harassment may cause victims to avoid school activities that put them at risk for further victimization. The AAUW (1993) survey showed that 24% of female victims stayed home from school or skipped a class; 33% reported that they did not want to attend school because of the harassment; and 28% found it more difficult to pay attention in class after being sexually harassed. In addition, 17% of the female victims gave up sports or other activities because of the harassment. Larkin (1994) reports similar findings, all of which have negative implications for educational opportunities and career and economic potential (Strauss, 1993). In turn, the decrement in career and economic potential has implications for poorer health outcomes (Health Canada, 1999a).

*Schools as Training Grounds for Future Violence.* Several feminist researchers and theorists have suggested that peer sexual harassment in the schools may contribute to further sexual and physical abuse in future relationships (Jones, 1985; Larkin, 1994; Stein, 1993, 1995; Strauss, 1992). High school is a critical time for gender socialization and, as Larkin notes, “being harassed at school teaches young women to accept this behaviour as an inevitable part of daily life” (p. 30). Unchecked harassment, through tolerance or ineffective responses, may also teach boys to be batterers or perpetrators of sexual assault. Larkin reports that Marion Boyd, then Minister of Ontario Women’s Issues, has argued that “sexual assault is learned at a young age and begins when school-age boys start calling girls cows, pigs, sluts and other derogatory
names.” (p. 14). This potential for future gendered violence has long term and severe health implications.

**Summary of Sexual Harassment Health Outcomes Literature**

Investigation into the health outcomes of sexual harassment among adolescents remains the weakest aspect of the sexual harassment field of research. There has been almost no systematic inquiry of the physical and psychological health effects of harassment for adolescents, and the rigour of many of the other studies relating to the effects of workplace harassment has been criticized. However, findings from more recent investigations into the sequelae of workplace harassment, combined with the self-reported effects of peer harassment among adolescents are converging to suggest that peer sexual harassment is a deleterious experience for adolescent women.

Tolerance for sexual harassment in the schools may have long term and severe implications for health by creating patterns of perpetrator and victim behaviours that lead to further physical and sexual abuse within intimate relationships. In addition, the hostile environment may result in lost educational opportunities leading to fewer career options and reduced income potential. Much more, and more rigorous, inquiry is needed into the relationships between sexual harassment and various health outcomes.

**Adolescent Health**

Despite mortality and morbidity rates that are relatively low when compared with other age groups, adolescent health is of great concern to health care practitioners and researchers. The health status of adolescents appears to have declined when compared with that of previous generations, and adolescents are putting themselves at short-term and long-term risk through their health-related behaviours (Millstein, 1993; Millstein & Litt, 1990; Raphael, 1996).
The health issues for Canadian and American youth appear to be very similar (CICH, 1994, 2000; Health Canada, 1999b; USDHHS, 1992). Unintentional injuries (predominantly motor vehicle accidents), suicide, and homicide are the leading causes of death in both Canada and the US, with alcohol consumption playing a significant role in each of these. Together, they account for more than 73% of all adolescent deaths in both countries. Healthy sexuality is also a major concern, with unintended pregnancy and sexually transmitted disease having both immediate and long-term consequences for health. Other health issues for the young people include nutrition and the maintenance of a healthy body weight, physical fitness and exercise, and tobacco and alcohol use. Mental health, though, may well be the most critical issue facing our youth today. Indeed, the Canadian Institute of Child Health (2000) recently termed mental health as the “new morbidity” for children and youth. Related to this is the need to reduce bullying, and physical and sexual assault among young people.

This section of the literature review will focus on two key areas of adolescent health, health behaviours and mental health status, including a discussion of gender differences. It begins with a discussion of health from the perspective of adolescents, and concludes with a discussion of research issues.

Adolescents’ Conceptualizations and Concerns About Health

It seems apparent from the discussion above that adolescence is a stage of life that presents “its own particular set of health concerns and health problems” (Dubow et al., 1990, p. 44), at least from the perspective of health care providers and researchers. However, it is important that adolescents’ perspectives on health also be considered. This should include adolescents’ conceptualizations of health, descriptions of their phenomenological experiences of
health and the meanings attributed to various health behaviours (Millstein, 1993), and their identification of health needs and concerns (Dubow et al.).

Rosenbaum and Carty (1996) conducted a qualitative study to determine the meanings of health and health care as experienced by a sample of Ontario adolescents. The themes that emerged, “well-being, absence of illness, being fit, dealing with problems and taking responsibility” (p. 744) support the notion that health is a multidimensional construct and are consistent with definitions found in the literature on adult health. Millstein (1993) cites several other studies of youth which indicate that adolescents’ constructions of health include social functioning and realizing one’s potential, in addition to mental and physical functioning.

Raphael (1996) presents four definitions of adolescent health found in his recent review of the literature on the determinants of adolescent health. They include (1) a successful transition to adulthood; (2) successful coping and well-being, (3) the absence of physical and mental illness, and (4) the development of a healthy, risk-free lifestyle. These are not necessarily equally valued by adolescents. For example, a 1986 study by Feldman, Hodgson, Corber, and Quinn (as cited in Dubow et al., 1990) found that only 1% of the adolescents were concerned about their alcohol use, whereas 49% reported using alcohol. Millstein (1993) suggests that although adolescents are typically aware of the risks of health-related behaviours such as substance abuse, they “probably underestimate the potentially negative consequences of their personal behaviour” (p. 106).

In a study of almost 1,400 students from grades 7 through 12, Dubow and colleagues (1990) found that a substantial proportion of the participants reported experiencing mental health problems such as depression (62%), feeling overweight (46%), and suicidal thoughts (36%); and physical health complaints such as headaches (92%), frequent colds/coughs (84%),
fatigue (75%), stomach aches (75%), and muscle or bone aches (58%) during the prior year. For each of these complaints, significantly more females than males reported experiencing these problems as “troubling”. There was only one problem that was identified as troubling by more males than females; this was the externalizing disorder of vandalism. These findings are consistent with Millstein’s (1993) summary of the literature and conclusion that “females consistently report thinking more about their health, having more health concerns, and experiencing more health problems than do males” (p. 102). In the BC Adolescent Health Survey II (McCreary, 1999), 44% of the male students rated their health as excellent, compared with only 28% of female students. These rates are consistent with that found in the first BC Adolescent Health Survey conducted in 1992. In addition to reproductive-system concerns, these differences have been attributed to girls’ concerns about their appearance and weight, their social relationships, and emotional well-being; as well their experience of higher levels of stress related to interpersonal relationships (Compas, Orosan, & Grant, 1993; Millstein, 1993; Schonert-Reichl & Offer, 1992). Canada’s 1990 Health Promotion Survey data indicate that 53% of females aged 15 to 19 years described their lives very stressful or somewhat stressful, compared with 43% of the males (CICH, 1994).

Mental Health Status of Adolescents

There seems to be fairly consistent evidence that mental health problems peak during adolescence, and that the prevalence of depressive disorders, in particular, has been rising since the turn of the century, concomitant with a lowering of the age of onset (Diekstra, 1995; Gore et al., 1993; Millstein & Litt, 1990). Schonert-Reichl and Offer’s (1992) review of the literature indicates that adolescence marks a significant turning point with respect to mental health, with a substantial increase in prevalence and a reversal of gender patterns. They note that girls tend to
be mentally healthier than boys during childhood, but less healthy after entering adolescence. Schonert-Reichl and Offer also note that, although results have been somewhat mixed, most findings also indicate a gender difference in the type of disorder or symptoms. Girls tend to demonstrate internalizing disorders such as depression, anxiety, or eating disorders; whereas boys demonstrate externalizing disorders or behavioural problems such as substance abuse or delinquency. This is consistent with the higher rates of depression among adult women compared with adult men.

Studies cited by Schonert-Reichl and Offer (1992) indicate that the rate of psychiatric disturbance among adolescents is approximately 20%. In the BC Adolescent Health Survey II (which is not seeking to make a clinical diagnosis), 9% of the females report being emotionally distressed during the prior month, compared with 5% of the males (McCreary, 1999). Another gender difference is seen in the age-related trends, with older adolescents, both male and female, reporting the most distress. For example, the distress rates among girls show a steady increase from age 12 (4%) to age 17 (11%). The 1993 Canadian Youth Mental Health and Illness Survey of adolescents aged 12 to 18 years, found that 43% of the females reported feeling “really depressed once a month” (CICH, 1994, p. 96), compared with 23% of the males.

There is a need for caution when interpreting findings and comparing studies. Diekstra (1995) and Merikangas and Angst (1995) note that depressive disorders are typically measured either by self-report or diagnostic interviews, with much variation in the prevalence time period and diagnostic criteria. There is also considerable variability in samples, with ages ranging from early adolescence (i.e., 11 years old) up to late adolescence (i.e., 20 or 21 years old). The validity of the measurement instrument must also be considered when interpreting depression scores. Campbell, Byrne, and Baron (1992) suggest that some of the apparent gender difference in
depression may actually be a reflection of gender differences in socialization. It has been suggested that “the phenomenon of depression is conceptually similar to the female role in Western society” (Campbell et al., p. 324); Campbell et al. therefore suggest that females will be more likely than males to endorse items on a depression scale, even at low levels of distress. Schonert-Reichl and Offer (1992), however, cite a number of studies which have failed to support the hypothesis that females overreport their concerns and conclude that the observed gender differentials should be accepted as reported.

Depression is disruptive to social and psychological development among adolescents (Merikangas & Angst, 1995). Even more critical is its relationship to suicide. Suicide rates have been rising significantly among adolescents, and suicide is now the second leading cause of death for adolescents within Canada and the third leading cause of adolescent death in the US (CICH, 1994; USDHHS, 1992). Diekstra (1995) cites numerous studies which indicate that suicide ideation ranges between 3.5 and 52.9% depending upon the definition used and the time period of interest. Diekstra notes that the term suicidal ideation refers to a range of cognitions “that can vary from fleeting thoughts that life is not worth living ... to an intense delusional preoccupation with self-destruction” (p. 214). Suicidal behaviours (parasuicide) also vary in nature and have been shown to range between 2.4 and 20% (Diekstra), with adolescent females making significantly more suicide attempts than their male counterparts. Statistics Canada (as cited in CICH, 1994) reports that adolescent women between the ages of 15 and 19 years “are hospitalized for attempted suicide at a rate twice that of young men” (p. 97), although the suicide rate for males is six times higher than that for the young women. The BC Adolescent Health Survey II (McCreary, 1999) found that far more adolescent females had attempted
suicide compared with adolescent males (9% and 4%, respectively); 2% of the total sample of students between grades 7 and 12 reported being injured in a suicide attempt.

**Health-Risk Behaviours of Adolescents**

Adolescence is a critical stage of life for the development of health practices and other health-related behaviours. Results of studies in Canada and the US indicate that the use of tobacco, alcohol and other drugs, nutrition, physical fitness, sexual risk behaviours, and other health-related habits are significant issues for adolescent health. Clearly, not all adolescents are at risk, but the risks are occurring at ever younger ages (BC Ministry of Health, 1995) and have implications for long-term lifestyle and health practices (Guthrie et al., 1994). It has also been noted that early onset of alcohol and drug use is predictive of more serious substance problems later on and that substance use tends to be associated with other problem behaviours such as sexual risk-taking or delinquency (Donovan & Jessor, 1985; Donovan et al., 1988; Robins, 1995). This is also an important time for developing appropriate and healthful ways of coping with stress and distress (Thomas & Schandler, 1996).

**Prevalence and Incidence of Substance Use.** In British Columbia, data from the Adolescent Health Survey II (McCreary, 1999) indicate that approximately 15% of all students between grades 7 and 12 smoke on either an occasional or regular basis. (This is a significant decrease from the 25% rate found in the 1992 survey.) By age 17, 23% of BC youth smoke occasionally or regularly, with females being somewhat more likely to smoke than males. The majority of students (63%) have used alcohol at some point in their lifetime, and by age 18, approximately 80% of both males and females have tried alcohol. Males were slightly more likely to report binge drinking, defined as “consuming five or more drinks of alcohol within a couple of hours” (p. 20). Among students who reported alcohol usage, 44% reported binge...
drinking in the past month, up from 36% of students in the 1992 survey. Approximately 40% of all students report having used marijuana at least once.

**Sexual Activity and Risk-Taking.** From US studies, there has been evidence of a trend towards “earlier coital onset, greater numbers of partners during adolescence, and inconsistent or inefficient use of contraceptives” (Tubman, Windle, & Windle, 1996, p. 183), factors which leave adolescents at risk for unwanted pregnancy, sexually transmitted diseases (STD) including AIDS, pelvic inflammatory disease, and infertility. Nonetheless, the BC Adolescent Health Surveys (McCreary, 1993; 1999) found a decline from 1992 to 1998 in the proportion of teens who reported engaging in sexual activity during their school years (from 30% to 23%). Results of the 1992 study indicated that males were more likely to be sexually active than females (33% compared with 28%), but the 1998 survey found rates that were almost equivalent (24% and 23%). Unsurprisingly, reports of sexual activity increased with age, with 42% of the 17-year-old students in the second survey reporting that they had been sexually active, although the rates varied by region in the province. Of the sexually active students, 27% of the males, and 20% of the females, reported having had four or more partners in their lifetime. The rate of condom use reported by sexually active students for their last sexual experience was 64% for males and 53% for females, findings that were unchanged from the 1992 results. The 1992 findings had shown that condom use decreased substantially between grades 9 and 12 (from 71% to 57% for males, and from 63% to 45% for females), perhaps because other forms of contraception were being used at older ages. Nonetheless, this leaves the adolescent at risk for sexually transmitted disease. Results also showed that substance use correlated with having multiple sexual partners.

**Clustering of Risk Behaviours.** In their study 10th and 11th grade students (N = 1,167) Tubman and colleagues (1996) found a significant association between higher levels of sexual
risk-taking and higher levels of substance use and other problem behaviours. They also found an association between sexual risk-taking and higher levels of alcohol used as a means of coping with stress. These findings are consistent with the covariation found by Donovan and colleagues (Donovan & Jessor, 1985; Donovan et al., 1988) among problem behaviours such as tobacco, alcohol and marijuana use, delinquent-type behaviours, and precocious sexual activity. Evidence of this clustering behaviour was also provided by the Alberta study on substance abuse (Bertrand, Smith, Bolitho, & Hornick, 1994) and the BC Adolescent Health Survey (McCreary, 1993).

**Researching Adolescent Health Behaviours.** A number of researchers (e.g., Elliott, 1993; Thomas & Schandler, 1996) have noted the importance of distinguishing between experimentation and a problematic pattern of behaviours. Adolescence is a phase of the life cycle which involves extensive personal and social development, thus encouraging "experimentation with a wide range of behaviours" (Gillis, 1996, p. 314); some of these behaviours may involve long or short term health risks even without being established as a risk-taking lifestyle. However, if the research outcome of interest is the pattern of health-compromising behaviours, incidence (frequency) rather than prevalence would be the better measure. Another strategy is to focus on clusters of problematic behaviours as advocated by Jessor (1991) rather than to examine singular behaviours.

**Summary of the Literature on Adolescent Health**

This section of the literature review has presented an overview of the health status and health behaviours of adolescents. It was noted that adolescents are at high risk for psychological disturbances and at greater risk than previous generations. It was also noted that adolescent
mortality is largely preventable. Clearly, more attention must be directed toward the social and environmental risk factors.

The Stress-Health Relationship Within Adolescence

Sexual harassment researchers have recently begun to use stress and coping theory as a foundation for their research (e.g., Fitzgerald, Drasgow, et al., 1997; Schneider et al., 1997; Swan, 1996). Popularly conceptualized as a source of illness, stress has also been the focus of intense scientific investigation. However, conceptualizations of stress have changed over time, contributing to the critique that the concept of stress is poorly defined and lacking in a common meaning (Mason, 1975; Mulhall, 1996). Stress has been conceived of as a stimulus, a biological response, and a transactional process (Kasl, 1996), and researchers have taken various approaches to its measurement and incorporated an array of factors that believed to influence its adaptational outcomes.

Lazarus and Folkman's (1984) transactional model of stress and coping presents the person and the environment as being in a dynamic and reciprocal relationship involving (a) cognitive appraisal of the environmental demand (primary appraisal) and his or her possible responses (secondary appraisal), and (b) coping efforts to manage the situation or resultant emotions. Appraisal and coping are considered mediating variables between the person, the environment, and the adaptational outcome (Folkman, Lazarus, Gruen, & DeLongis, 1986). A mediating variable is a third variable that represents the mechanism or process through which the independent variable influences the dependent, outcome variable (Baron & Kenny, 1986; Lindley & Walker, 1993). In summary, Lazarus and Folkman define stress as "a relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being" (p. 21). Although the transactional
nature of this definition offers more complex possibilities for stress-health research than the notions of stress as an universal stimulus or physiological response, it also introduces a subjectivity that may complicate measurement of the stressor. Furthermore, by implying conscious appraisal, it may fail to capture the wear and tear of more minor irritations that are not consciously perceived as stressors but which may also yield negative health outcomes.

Coping has received great attention in both lay and scientific literature. Lazarus and Folkman (1984) defined coping as the deliberate efforts taken deal with the stressor; it does not imply a successful outcome as in popular discourse. Lazarus and Folkman categorized coping behaviours as either problem-focused (i.e., directed at the environmental problem that is causing distress) or emotion-focused (i.e., attempts to manage the person's emotional response to the problem such as denial or self-blame). Others have similarly dichotomized coping behaviours as either approach or avoidant, or direct and indirect (e.g., Ebata & Moos, 1989, 1994).

**Categories of Stress**

Stress cannot be considered a unitary phenomenon (Compas et al., 1993). Psychosocial stressors have been categorized in various ways, but most frequently are designated as life events, daily hassles, or chronic strains (Thoits, 1995). *Life events* are defined as “acute changes which require major behaviour readjustments within a relatively short period of time” (Thoits, p. 54), such as the death of a sibling or parental divorce. In contrast, *hassles* or microstressors, are the everyday kind of annoyances such as arguments with siblings or worrying about grades at school (Bobo, Gilchrist, Elmer, Snow, & Schinke, 1986; Kanner, Coyne, Schaefer, & Lazarus, 1981; Lazarus, DeLongis, Folkman, & Gruen, 1985) that may require cognitive or behavioural adjustments. Both hassles and life events are generally measured on a summative basis. *Chronic strains* fall outside of the ‘life events versus hassles’ dichotomy but overlaps conceptually with
both. Chronic strains are those stressors that persist over an extended time frame such as family poverty or neighbourhood violence, and thus may vary in degree of severity.

In addition to magnitude and chronicity, there is one other dimension that is often used to categorized the stress experienced by adolescents and that is the normality of the stressor. Normative stressors include the expected biological changes of adolescence as well as environmental demands that are not uncommon, such as moving to a new school. Nonnormative or atypical stressors are those stressors that are experienced by only a proportion of the adolescent population, may pose greater risk such as child abuse, parental divorce or criminality, or serious illness (Compas et al. 1993; Hauser & Bowlds, 1990). Compas and colleagues (1993) have accounted for all three dimensions in their tripartite conceptualization of stress as (1) generic stress, which includes normative microstressors and normative major life events; (2) severe acute life events; and (3) severe chronic stress. This categorization does not accommodate well the concept of sexual harassment. Although the less severe forms of sexual harassment might be categorized as microstressors, the term ‘normative’ is problematic as it depreciates the need for change. More severe and traumatic forms of sexual harassment (e.g., sexual coercion) do fit within the category of severe acute life events.

Adolescents’ Perceptions of Stress

Although there has been considerable research into the process and outcomes of stress and coping among adolescents, there has been less investigation of stressors as perceived by adolescents. One of the more extensive programs of research into adolescent stress is that by Seiffge-Krenke (1995) who conducted a series of seven studies involving more than 2000 German adolescents. Seiffge-Krenke found that ongoing minor stressors were reported to matter more than major life events, with interpersonal/relationships issues and school-related concerns
being the most frequently cited and salient stressors for adolescents between the ages of 12 and 17. Family relationships were also found to be an important source of stress among female adolescents, although relationship stressors, in general, were reported to be more frequent and more upsetting experiences for females than males. Similar gender differences were reported by Newcomb, Huba, and Bentler (1981), Siddique and D’Arcy (1984), and Wagner and Compas (1990).

Other researchers have also found the school environment to be an important source of stress (e.g., Armacost, 1989; de Anda et al., 2000; Omizo, Omizo, & Susuki, 1988). For example, Armacost’s survey of 1300 high school students in grades 9 through 12 found that “the academic performance grouping system, having jobs and keeping up with school, and fear of theft of personal belongings were identified by students as being the stressors of greatest concern” (p. 443). Academics and social life were identified as being most troubling to female students, whereas males reported being most concerned with athletics and job concerns. The most frequently cited stressor in De Anda et al.’s study of students in grades 10 and 11 was concern about future goals, which could be reflective of the opportunities perceived to be available to the predominantly Latino and African-American population in the study and their age.

Unsurprisingly, there is evidence of developmental differences in adolescents’ concerns. Wagner and Compas (1990) found that family-related stress, peer-related stress, and academic stress were the most significant source of stress for the early, mid, and late adolescent periods, respectively. Omizo et al. (1988) similarly found that concerns about the future and school-related problems were the most frequently reported stressors among older high school students,
whereas autonomy issues, developmental changes, and peer pressure were the stressors mentioned most often by the grade 7 and 8 students.

**Stress-Health Linkages**

Much of the stress literature that has emerged from the field of social science makes only brief mention of the pathways by which stress may influence health outcomes, tending to focus, instead, on people’s appraisals and self-reported responses to stress. In contrast, the biomedical approach to stress focuses on responses at the molecular and systems levels and may be criticized for ignoring “the human element”. Because of implications for the selection and operationalization of health outcome variables, the following summarizes the hypothesized biophysical linkages between stress and health.

**Psychophysiological Pathways.** It has been proposed that there are two main pathways through which psychological stress can influence health outcomes: psychophysiological and cognitive-behavioural pathways (Steptoe, 1991). The psychophysiological pathway consists of neuroendocrine and immune system responses.

The term neuroendocrine refers to hormones that are linked to the nervous system (Mosby, 1994). The sympathetic adrenal-medullary (SAM) system and the hypothalamic-pituitary-adrenocortical (HPAC) system are two endocrine systems that are known to be activated through stress and emotion, sometimes simultaneously (O’Leary, 1990; Tsigos & Chrousos, 1996). Epinephrine, norepinephrine, and other catecholamines are released into the bloodstream when the SAM system is activated, whereas the adrenocorticotropic hormone (ACTH) and corticosteroids (e.g., cortisol) are released upon activation of the HPAC.

Activation of the neuroendocrine system is considered to be an adaptive response to stress which facilitates more appropriate mobilization of the body’s resources (Fisher, 1996;
Tsigos & Chrousos, 1996). For example, there may be suppression of gastric functioning and the inflammatory response concomitantly with increases in vascular tone, respiratory rate, and mental alertness. However beneficial, the “side effects” (Fisher, p. 130) of neuroendocrine activation (e.g., dizziness, muscle tension, gastrointestinal dysfunction, or breathlessness) may be interpreted as illness or labelled as symptoms of disease. Furthermore, functional or structural disorders may be generated through ongoing activation of the stress response. Chronically high levels of catecholamines could lead to hypertension, myocardial infarction, or stroke, and chronic stimulation of the HPAC system might potentiate irritable bowel syndrome (Tsigos & Chrousos). However, it is not just the ongoing nature of the stressor that is implicated in adverse sequelae. As Fisher notes:

The human capacity to re-experience unpleasant events in reflective thinking or to anticipate and hence experience much of the threat of an impending event in advance, provides major means of driving and maintaining states of pathological arousal .... [resulting in] persistent functional abuse of bodily symptoms. (p. 131)

The general function of the immune system is to identify and destroy invading antigens (e.g., bacteria or viruses) and malignancies of the person’s own cells (Mosby, 1994). Immune functioning may be influenced directly by the central nervous system, or indirectly through the neuroendocrine system via the SAM and HPAC systems (Cohen & Williamson, 1991; Fisher, 1996; O’Leary, 1990). Although numerous physiological pathways and mechanisms have been identified which link stress with immune effects, relationships and final outcomes have not yet been clearly identified. For example, activation of the HPAC system tends to depress immune functioning through the effects of cortisol, but the autonomic nervous system may exert both immunopotentiating and immunosuppressive effects (Tsigos & Chrousos, 1996, p. 75). However, just as chronically altered physiological states do not necessarily result in disease,
humans may similarly be able to tolerate significant fluctuations in their immune function without succumbing to illness (O’Leary). It seems that the psychophysiological pathways are but part of a more complex web.

**Cognitive-Behavioural Pathways.** In addition to the psychophysiological-pathways discussed above, it is posited that cognitive-behavioural pathways provide a second mechanism by which psychosocial stress can influence health outcomes. Cohen and Williamson (1991) suggest that stress influences disease indirectly through negative affect. For example, people might sleep less, overeat, initiate or increase their use of tobacco and alcohol, engage in unsafe sexual practices, and take other unnecessary risks in response to stress-induced anxiety or depression. However, many of these health-risk behaviours might be considered coping mechanisms and might occur even in the absence of negative affective states. Furthermore, stress may have a differential impact on health-related behaviours (Griffen, Friend, Eitel, & Lobel, 1993). Risk behaviours may be increased, but health-protective behaviours may also be impacted; thus, health status could decline through a decrease in positive health behaviours (Wiebe & McCallum, 1986).

Cognitive-behaviour pathways may lead to various outcomes, although it is the negative outcomes that receive the most research attention. Changes in health-related behaviours may (a) expose the person to infectious agents (e.g., through increased social contacts) leading to the onset of infectious disease, (b) alter the person’s susceptibility to infection or the reoccurrence of a latent disease (e.g., through poor nutritional status or fatigue) or (c) affect the course of an ongoing or chronic disease (Cohen & Willliamson, 1991; Steptoe, 1991). It would be naive to assume that health-related behaviours are determined primarily by psychosocial stress. Nonetheless, “the pattern or frequency of health-related practices may be affected by
psychosocial stressors" (Steptoe, p. 637), and increasingly we recognize behaviour and lifestyle as critical factors in health outcomes.

**Evidence Linking Stress with Immune System Reactions**

Although the research suffers from a number of limitations, and many questions remain unanswered, evidence is accumulating that psychosocial stress influences immune functioning (Cohen & Williamson, 1991; O’Leary, 1990). Studies have been subject to limitations related to both selection of the sample and operationalization of stress. Most studies have investigated the effects of a single, naturally occurring stressor on the immune systems of healthy adults, and many have focused on acute, short-term stressors such as academic examinations (O’Leary). Samples are typically comprised of university students who are not necessarily representative of the general population in terms of age, ethnicity, or socioeconomic status. Similarly, an academic examination may not be representative of psychosocial stressors, and single events may not be representative of the stress people typically experience in the course of life.

Research has found mixed effects for acute stressors (O’Leary, 1990). For example, lymphocyte levels have increased in some studies, but decreased in others, although these inconsistent results may be due to the differential influence of the SAM and HPAC systems (O’Leary). Kang, Coe, McCarthy, and Ershler (1997) obtained mixed findings in their study of examination stress on asthmatic and non-asthmatic high school students. Although there were no significant differences in immune functioning between groups, it was found that natural killer cell activity decreased during the exam period whereas lymphocyte levels increased. Both measures of immune change retreated towards baseline during the two week post-exam period. In a study comparing a group of children with a history of recurrent upper respiratory tract infections with a matched group of healthy children, the former group was found to report
significantly higher levels of psychosocial stress and to exhibit lower levels of mucosal immunity, as measured by salivary immunoglobulin levels (Drummond & Hewson-Bower, 1997). At the time of O’Leary’s (1990) review of the literature on stress and immune functioning, there was relatively little data available regarding the effects of chronic stressors. The existing findings, however, did indicate a relationship between chronic stress and the suppression of immunity and, moreover, suggested that “prolonged stress may result in prolonged immunosuppression” (O’Leary, p. 368).

Immune functioning is typically operationalized through the measurement of one of more types of immune cells (e.g., antibodies, T cells, or other lymphocytes). However, Cohen and Williamson (1991) question the adequacy of this approach as an indicator of host resistance. Most critically, they note that the fluctuations that have been identified in response to psychosocial stressors tend not to fall outside normal ranges of human immune functioning. Furthermore, there is insufficient evidence to conclude that such changes render the person more susceptible to disease. Temporal issues, such as length of exposure to the stressor and timing related to exposure to the pathogen, also require further investigation.

**Evidence Linking Stress and Health-Related Behaviours**

There is considerable evidence linking stress with health-risk behaviours among adolescents; much of the evidence has emerged from longitudinal data. Newcomb and Harlow (1986) collected both cross-sectional and longitudinal data from two different samples of high school and college students. Structural equation modelling analyses indicated a direct pathway between negative life events and alcohol and drug use for the longitudinal data (N = 722), but an indirect effect only (through the mediating constructs of perceived loss of control and meaninglessness) for the cross-sectional data (N = 376). In a larger study of Australian
adolescents (13 – 17 years old, N = 6,579), Byrne, Byrne, and Reinhart (1995) found a
significant relationship between daily or chronic stress and the decision to commence smoking,
independent of the level of neuroticism. Data for the latter study were collected at two time
points, 12 months apart. Wills (1986) also demonstrated a positive relationship between
perceived stress and alcohol use and smoking through a 2-year prospective study of young
adolescents (i.e., in grades 7 and 8 at the beginning of the study). A strength of these prospective
studies is that they have demonstrated an increase in substance use over time, “thus indicating
that high stress is not simply a consequence of prior substance use” (Wills & Filer, 1996, p. 95).
The study by Wills was replicated later with a cross-sectional sample of early adolescents (N =
1,289), from predominantly minority backgrounds (Wills, Vaccaro, & McNamara, as cited in
Wills & Filer). The standardized regression coefficients found by Wills and colleagues have
been moderately low, ranging from .15 to .30. Furthermore, in the replication study, the
relationship neared nonsignificance among participants with high positive affect.

Also of relevance to this study are findings by Wills and Cleary (as cited in Wills &
Filer, 1996) that 10th grade students have attributed their smoking and drinking behaviours more
to coping motives such as to calm down, to cheer up, or to forget one’s troubles (B = 0.56 and
0.45 for smoking and heavy drinking, respectively) than to the influence of their peers. Social
influence was nonsignificant within the regression analyses, but social desirability response bias
was not taken into account. Adolescents may be more strongly influenced by their peers than
they are willing to admit.

Findings of other studies have failed to support the hypothesized relationship between
stress and health-risk behaviours. In a study of adolescents aged 12 - 14 years, Rhodes and Jason
(1990) failed to find a significant pathway from stress to substance abuse (defined in terms of
the frequency and level of use for tobacco, alcohol and marijuana). Data were collected at two time points, eight months apart. Substance use and stress (i.e., life events that had occurred during the preceding 12 months) were measured at the beginning of the study; substance use was reassessed at time two. It has been argued, however, that major negative life events will predict physical or psychological disturbances for the subsequent 6 to 12 month period (Thoits, 1995). Thus, the nonsignificant findings may be due to the excessively long 20 month period under investigation. In another study of somewhat older adolescents from grades 11 and 12 (N = 563), Swaim, Oetting, Edwards, and Beauvais (1989) found that emotional distress explained only 4.8% of the variance in drug use; whereas peer drug associations accounted for 41% of the variance. Path analyses demonstrated only a weak and indirect link between emotional distress and drug use. However, it may be significant that Swaim and colleagues used the emotional distress variables of anger, depression, anxiety, self-esteem and blame/alienation as predictors rather than a measure of the experience of stress. This leaves open the possibility that stress may operate directly on health-related behaviours, rather than through emotional or psychological distress.

Griffen and colleagues (1993) are among the few researchers to investigate the effects of stress on health-protective behaviours. They examined the relationship between increases in daily hassles and academic stress and changes in health practices as indicated by measures of exercise, nutrition, self-care, vehicle safety and drug avoidance, but failed to find the hypothesized inverse relationship. The validity of their findings may have been weakened, however, by an attrition rate of more than 59.5% over the 7-week study; this was among a sample of older adolescents (M = 18.4 years).
Evidence Linking Stress with Physical and Psychological Health

Evidence linking stress with health outcomes has been inconsistent, perhaps due to diversity in (a) predictor variables (i.e., major life events, daily hassles, normative and nonnormative stressors, and combinations thereof); (b) research design (cross-sectional and longitudinal, of varying time periods); and (c) outcome variables. The latter has included measures of physical health, psychological health (both internalizing and externalizing), and psychosomatic complaints which have been used as an indicator of psychological distress.

Physical health problems have generally been operationalized in terms of somatic (i.e., bodily) complaints rather than diagnoses of disease states. Somatic complaints include headache, abdominal pain, nausea or vomiting, disruptions in bowel function, muscle tension, dizziness, insomnia, and breathlessness. For example, Niemi, Leivoska, Rekola, and Keinanen-Kiukaanniemi (1997) investigated and found a significant relationship between stress and neck and shoulder pain in a sample of over 700 Finnish high school students. Other researchers have included both somatic complaints and self-diagnosis of disease such as a cold or flu in their operationalization of physical health (e.g., DeLongis et al., 1988).

The Effects of Life Events. Although Aldwin (1994) argued that the duration of stress effects remains controversial, Thoits (1995) maintains that it has now been well demonstrated that major negative life events will predict physical or psychological disturbances during the subsequent 6 to 12 month period. For example, using a three-wave panel design over a two year period and a probability sample of 677 adult community residents, Lin and Ensel (1989) found that physical symptoms reported for the prior 6 months were associated with undesirable life events reported one year prior. Most of the research related to the physical health effects of stress among adolescents, however, has been cross-sectional in design. For example, Aro,
Hänninen, and Paronen (1989) found that life events were associated with the occurrence of psychosomatic symptoms for 8-grade pupils in a Finnish secondary school (N = 2,246). Using a much smaller sample of 14-year olds (N = 108), Zeidner and Hammer (1990) found that negative life events were positively associated with both physical and psychological symptoms. In a Canadian study of 1,038 students in grades 9 through 12, Siddique and D’Arcy (1984) found significant relationships between psychological symptoms and three subjective measures of stress, although the measures of stress may reflect quality of social relationships more than stress, per se. Similar findings have emerged from clinical studies. In two studies of adolescent patients at a medical clinic (Greene, Walker, Hickson, & Thompson, 1985; Robinson, Greene, & Walker, 1988), researchers found that adolescents with functional somatic complaints of unknown etiology (e.g., recurrent gastric discomfort) reported significantly higher levels of negative life events than did other adolescents in the well-patient group or those with known organic illness.

Cross-sectional designs have also demonstrated significant correlations between adolescent stress and psychological outcomes, whereas the results from longitudinal studies have been mixed. Cohen, Burt, and Bjork (1987) failed to find a significant relationship between uncontrollable life events and psychological outcomes as measured over a 5-month period. These findings are consistent with an earlier study by Swearingen and Cohen (as cited in Cohen et al.), which found significant cross-sectional results, but nonsignificant longitudinal results. In contrast to these findings, in a 9-month study of young adolescents, Compas, Howell, Phares, Williams, and Giunta (1989) found that stress did predict depression, anxiety, and behavioural problems after accounting for initial symptoms. In the latter study, the measure of stress (the Adolescent Perceived Events Scale) included both major life events and daily events or hassles.
Other prospective, longitudinal studies cited by Compas (1995) have also found significant predictive relationships between stress and psychological symptoms after controlling for symptoms that existed at the beginning of the study (e.g., Allgood-Merten, Lewinsohn, & Hops; Hammen, Burge, & Adrian; and Stanger, McConaughy, & Achenbach).

*The Health Effects of Daily Hassles.* Daily hassles may appear inconsequential when compared with life events that require considerable adjustment. Nonetheless, it is hypothesized that hassles pose a threat on accumulation and/or when they are perceived as a severe irritation, and there is evidence that daily hassles may actually be even more predictive of poor physical and mental health outcomes than major life events. In a study of 112 Hong Kong adolescents, Wu and Lam (1993) found significant relationships between daily stress and a measure of physical health which was intended to capture both short term health problems and overall health status. Banks and Gannon (1988) found that hassles consistently contributed above and beyond life events in predicting somatic symptoms for 88 university students. Wagner, Compas, and Howell’s (1988) causal modelling analyses yielded no significant direct pathways between major life events and psychological symptoms for a sample of 58 older adolescents but did find significant pathways between major life events and daily events and between daily events and psychological symptoms. The latter suggests that major stressors may reduce a person’s ability to deal with the minor stressors of everyday life (Pearlstone, Russell, & Wells, 1994; Thoits, 1995).

**Mediators and Moderators of the Stress-Health Relationship**

Research has demonstrated that stress accounts for a significant but rather small proportion of the variance in physical and mental health, with correlations typically falling in the .20s and .30s (Aldwin, 1994; Barr et al., 1996). People vary in their responses to stress. Some
respond psychologically, others physically. People may experience somatic discomforts; the initiation of an infectious disease, or the flare-up of an existing chronic disease. Still others report no adverse outcomes in response to similar stressors. That people do not respond equally to stress has sparked researchers' interest in factors that may influence the relationship between stressors and health outcomes; these are termed mediating and moderating variables. A moderating variable functions through an interaction with the predictor variable to alter its effects (i.e., magnitude or direction) on the outcome variable (Lindley & Walker, 1993). A mediator, however, is consequential to the stressor but antecedent to the health outcome. It is the process through which the predictor variable influences the outcome variable. Within the field of stress and coping research, particular interest has been directed towards coping resources and coping strategies.

Coping Resources. Coping resources include social and personal characteristics that are believed to mediate people's choice of coping strategies or moderate the effects of the stressor on the health outcome (Lazarus & Folkman, 1984). Many different coping resources have been examined in the literature with varying results; these include social support (e.g., Aro et al., 1989; Walker & Greene, 1987; Zeidner & Hammer, 1990), beliefs about control (e.g., Compas, Banez, Malcarne, & Worshham, 1991), hardiness (e.g., Banks & Gannon, 1988), and instrumentality (Wagner & Compas, 1990). Of these, social support has been most frequently studied, and although it has found to be positively associated with better physical and mental health, it remains uncertain whether social resources exert their effects directly, indirectly, or through a combination of pathways (Thoits, 1995).

Coping Strategies. There has also been little convergence among the studies into coping strategies. It has been demonstrated that people tend to use multiple strategies in response to
major life events, daily hassles, and ongoing strains, employing both problem-focused and emotion-focused coping behaviours in the same situation (Folkman et al., 1986; Thoits, 1995). However, less is known about the efficacy of the different forms of coping. Although it was originally expected that problem-focused coping would be more effective than emotion-focused coping, current wisdom suggests that efficacy will depend on the match between the situation and the response (Lazarus, 1999). Still, there is no clear consensus in the literature regarding relative efficacy with respect to physical and psychological health outcomes for adults or adolescents (Gore & Eckenrode, 1996; Thoits). Furthermore, although it has been demonstrated that some behaviours (e.g., denial or substance use) may be helpful in the short-term, in the long-term, such strategies may be harmful (Thoits).

It has been theorized that the gender differences found in psychological health may be related to "gender differences in both exposure to stress and in coping with stress" (Compas et al., 1993, p. 332). However, few differences have been noted, and the only consistent finding has been that boys seek social support less frequently than girls (Ebata & Moos, 1994; Seiffge-Krenke, 1995; Stern & Zevon, 1990; Williams & McGillicuddy-De Lisi, 2000).

There has been little investigation into age-related differences in coping throughout adolescence (Lazarus, 1999), and the findings that do exist show inconsistencies. Some studies have failed to demonstrate any age-related changes in coping (e.g., Stern & Zevron, 1990), whereas Compas et al. (1993) found that emotion-focussed coping increased with age. Seiffge-Krenke (1995) concluded that mid-adolescence marks a change in coping patterns, with adolescents aged 15 and over generally using more direct, interpersonal problem-solving, although the use of all types of coping were found to increased with age. Williams and McGillicuddy-De Lisi’s (2000) results similarly indicate that older adolescents use a greater
variety of coping responses, and that they are more likely than younger adolescents to use
cognitive strategies for either direct problem-solving or reappraisal of its impact. Some of the
inconsistent findings may relate to the age range of the sample, gender, and the particular type of
stressors under investigation (Williams & McGillicuddy-De Lisi).

Measurement Issues in Stress-Health Research

The Measurement of Health Outcomes. The tendency towards a narrow focus on single
health outcomes has been soundly criticized (Aneshensel, Rutter, & Lachenbruch, 1991;
Steptoe, 1991; Thoits, 1995). Although this may be partly attributed to the historical distinctions
made between purely physical health problems, mental health problems, and psychosomatic
disorders, Thoits notes that whereas stress researchers concerned with physical health outcomes
have tended to also include mental health outcomes, the reverse does not hold true. Furthermore,
she points out that there has been a tendency for the psychologists and sociologists who have
focused on psychological outcomes to presume that their findings can be generalized to physical
health effects. Thoits and Steptoe suggest that more research be directed to the phenomenon of
comorbidity (e.g., a combination of mental and physical health problems), interaction effects,
and indirect effects, as well as long-term effects, including the possibility of positive outcomes.

The Measurement of Stressors. Perhaps a more difficult issue is the debate over
subjective versus objective measures of stress. Kasl (1996) suggests that there are circumstances
in which each might be the preferred measure, whereas Lazarus and colleagues (1985) have
argued that “no [italics added] environmental event can be identified as a stressor independently
of its appraisal by the person” (p. 776). In accordance with the latter view, Lazarus and others
(e.g., Compas et al., 1987) have introduced subjective appraisal into their measures of stress by
requiring each respondent to rate the severity or unpleasantness of each stressor experienced, in
addition to reporting its frequency.

**Summary of the Literature on Adolescent Stress and Health**

Research findings regarding stress-health relationships within adolescence have been
provocative. There is abundant evidence correlating stress with somatic complaints and health-
risk behaviours (although the relationship between stress and health-protective behaviours
remains less clear). Prospective, longitudinal research has also demonstrated significant
relationships between stress and various measures of psychological health after accounting for
initial symptoms. Studies with adolescents have also demonstrated that both major life events
and minor daily events are associated with maladaptive outcomes. Other research with adult
samples has also linked stress with changes in immune functioning and the occurrence of
infectious and chronic disease. Nonetheless, much of the research suffers from weaknesses in
design that limit causal inference, questions about the measurement of predictor and outcome
variables, and inadequate attention to the pathways linking stress with ill health. Still, it may be
that given the multidimensionality of both stress and health and the potentially diverse pathways
to negative health outcomes, the more general approach to stress research is less useful than the
examination of specific risk factors, relationships, and influencing factors.

**Summary of the Review of the Literature**

This chapter has provided a review and analysis of the literature pertaining to four
different areas: school-based sexual harassment, the health-related outcomes of sexual
harassment, the status of adolescent health, and the stress-health relationship within
adolescence. The literature, although relatively scarce, suggests that peer sexual harassment is a
common and injurious experience for adolescent women. Harassment also happens to young
men, but little is known about the context of the harassment, its comparative incidence, or its outcomes. Nonetheless, early studies suggest that the harassment of males is relatively less severe and less damaging.

The literature on adolescent health indicates that adolescents are at a high and ever increasing risk for psychological disturbances, with young women suffering significantly higher rates of internalizing disorders than young men. The reverse gender difference is apparent for externalizing disorders. It was also noted that adolescent mortality is due largely to unintended injuries, suicide, and homicide, all of which have been linked to alcohol use and are potentially preventable. The literature implies a need for greater attention to the social and environmental risk factors for adolescent health.

Research into the experience of stress within adolescence indicates that psychosocial stress is significantly associated with physical and psychological outcomes, and with health-risk behaviours. Furthermore, prospective, longitudinal research has demonstrated significant relationships between stress and various measures of psychological health after accounting for initial symptoms. Both major life events and minor daily events have been found to be associated with maladaptive outcomes. Research findings also indicate significant gender differences, with adolescent females incurring higher levels of interpersonal stress in general and having more severe psychological effects.

Considered in its entirety, these bodies of literature suggest that school-based peer sexual harassment may be a significant risk factor for the health of adolescent women. Far less is known about the harassment of adolescent men. The literature also demonstrates the importance of conceptualizing the effects of sexual harassment within the greater context of adolescents' lives.
The literature on sexual harassment victim responses has been criticized as being “atheoretical and dominated by simplistic notions” (Fitzgerald, Swan, & Fischer, 1995, p. 123). To avoid the same charge being laid against future health outcomes research, it must be remembered that sexual harassment cannot be treated as an objective, unidimensional stimuli or assumed that certain harassment situations are more stressful than others. Drawing upon the stress and coping literature suggests that women’s reactions to the multidimensional experience of sexual harassment will be mediated and moderated by their appraisal of the behaviours, their personal resources, and their coping strategies (Lazarus & Folkman, 1984); these in turn may be influenced by other individual factors and the context of their lives. The present study focussed primarily on the relationships between school-based peer harassment and the health and health behaviours of adolescents. It attended to some of the identified gaps in the literature regarding the harassment of men, and located the research within the context of adolescent school life and other school-based stressors.
CHAPTER THREE – THEORETICAL MODEL

The primary purpose of this study was to test a theoretical model of causal relationships between school-based peer sexual harassment and the psychological, physical, and behavioural health outcomes among adolescent females. Other school-related microstressors are included in the model, however, to partial out the effects of some of the other stressors that have been found to be significant in adolescents’ lives. A sub-objective was to compare the incidence and appraisal of peer sexual harassment according to the gender composition of the perpetrator-victim dyad. The data collected on the sexual harassment experiences of adolescent males will permit further testing of the theoretical model, with an examination of gender effects, but such analysis did not form part of this study.

The conceptual framework for this study was derived from a transactional theory of stress and coping (Lazarus & Folkman, 1984) which postulates that adaptational outcomes are connected to stress through people’s appraisal of, and responses to, the stressor. Figure 1 presents a model of the relationships that I initially hypothesized between peer sexual harassment, other school-based microstressors, and the health and health behaviours of adolescents. The model includes 10 constructs of interest; these are portrayed by latent variables which are assumed to represent the ‘true meaning’ of the constructs. The manifest or observable variables that served as indicators of the latent variables are discussed in later chapters.

There were two independent or exogenous variables in the theoretical model, Sexual Harassment-Frequency and School Stressors-Frequency. The eight dependent or endogenous variables included Sexual Harassment-Appraisal, School Stressors-Appraisal, Responses to Harassment, and the five health-related variables of Perceived Self-Worth, Depression, Physical Health Effects, Health-Risk Behaviours and Health-Promoting Behaviours.
Figure 1. Theoretical Model of the Relationships between Peer Sexual Harassment, Other School-Related Microstresses, and the Health and Health Behaviours of Adolescent Females
The two appraisal variables (Sexual Harassment-Appraisal and School Stressors-Appraisal) and one coping variable (Responses to Harassment) are presented as mediators in the stress-health relationship.

The model addresses the mediating effects of *behavioural* responses to sexual harassment rather than the full range of potential coping strategies, for substantive and methodological reasons. The focus of this study was not to determine the differential effects of various forms of coping with harassment, but to determine the range and relative effect sizes of health outcomes that are associated with sexual harassment. Secondly, although Magley and Fitzgerald (1996) have argued that the structure of coping responses cannot be adequately conceptualized according to a single dimension such as internal (emotion-focused) versus external (problem-solving) coping, or degree of assertiveness, school interventions could be designed to teach *behavioural* responses if it was determined that such responses are useful in reducing negative health outcomes. It would likely be less feasible to influence cognitive or internally-focused coping responses. Thirdly, much of the legal and public discourse around sexual harassment has been concerned with women’s behavioural responses to harassment, particularly as the legal definition of harassment incorporates the notion that sexually harassing behaviours are those that are *unwelcome* to the particular recipient (rather than setting an absolute standard for appropriate and inappropriate behaviours), thus suggesting that the recipient ought to “do” something to make it known that such behaviours are unwelcome (Magley & Fitzgerald). Hence, it becomes important to ascertain if behavioural responses do affect adaptational outcomes. Swan (1996) also focussed solely on behavioural coping strategies, which she identified as external coping. Finally, using a single latent variable for coping serves to minimize the total number of pathways to be estimated for a more
parsimonious model, and is more appropriate given the size of the sample.

The model is recursive; that is, all causal influences are assumed to be unidirectional. Theoretical development and justification for the causal arrangement of the constructs in this model were explored in the literature review in Chapter 2. Explanations of the specific hypothesized relationships are detailed below.

**Hypothesized Theoretical Relations**

All “causal relationships” within the model are depicted by one-way arrows between variables. Stress and coping theory and related research findings suggest that microstressors and minor daily events pose a threat through their accumulated demands on the person. Therefore, an increase in the frequency of sexual harassment experiences is postulated to have a direct, positive influence on the appraised severity or stressfulness of the experiences. A similar relationship is expected to hold between the frequency of other school-based microstressors and the appraisal of those microstressors. The curved double-headed arrow between the two exogenous variables indicates that Sexual Harassment-Frequency and School Stressors-Frequency are allowed to covary, suggesting that an individual may become more aware of each source of stress through the accumulation of environmental demands.

All health effects of sexual harassment are assumed to be indirect as mediated through appraisal and coping responses. It is expected that the use of behavioural coping responses will increase as sexual harassment experiences become more frequent and/or are appraised as more severe, and that there will be inverse relationships between Responses to Harassment and Depression, Physical Health Effects, and Health-Risk Behaviours. It is also hypothesized that there will be direct positive relationships between Responses to Harassment and Perceived Self-Worth and Health-Promoting Behaviours. The above is based on emerging evidence that the
experience of stress may diminish one’s ability to engage in health-enhancing behaviours or reduce the priority assigned to such behaviours relative to other demands in one’s life (Griffen et al., 1993; Wiebe & McCallum, 1986). Furthermore, a person may engage in health-risk behaviours (e.g., smoking) as a means of coping with the stressor (Cohen & Williamson, 1991; Wills & Filer, 1996). Thus, the model postulates that more frequent experiences and more severe appraisal of sexual harassment will indirectly yield an increase in mental and physical health effects (i.e., worsened health), more frequent health-compromising behaviours, a decrease in perceived self-worth, and less frequent health-promoting behaviours. However, as some of the observed health outcomes may be attributable to other school-related microstressors, effects are hypothesized between School Stressors-Appraisal and health outcome variables in a pattern consistent with that depicted above. Where there are no arrows, there is assumed to be an absence of effects. For example, behavioural coping responses to sexual harassment are assumed to be uncorrelated with the appraisal of other school-related stressors.

The final six pathways, founded on evidence from stress-health research, provide further explanation for the expected co-morbidity. It is hypothesized that depression will increase as self-worth decreases, and that, as emotional health worsens in response to stress (directly or indirectly), physical health will also worsen, with a corresponding increase in risk-taking behaviours and decrease in health-promoting behaviours. The effects on physical health and health-promoting behaviours are expected to be further compounded through the changes in health-risk behaviours.

To summarize, the model suggests that the health and health-related behaviours of adolescents are indirectly affected by the frequency of their sexual harassment experiences as
mediated by their appraisal of the situation and behavioural coping responses, and by the
frequency with which they experience other school-based microstressors, mediated by appraisal.
Coping strategies for the latter were not assessed or included as a construct in the model due to
the study’s focus on sexual harassment as a stressor. The model also indicates that health-related
behaviours and physical health outcomes are further influenced by the person’s psychological
responses to stressors. Consistent with stress and coping theory (Lazarus & Folkman, 1984),
there are no direct pathways from Sexual Harassment-Frequency or School Stressors-Frequency
to the various health outcome variables.

This chapter has presented only the theoretical components of the proposed model of the
relationships between school-based peer sexual harassment, other school-related microstressors,
and the health and health behaviours of adolescents. The measurement components of the
proposed model are introduced in the following chapter on research methods, although it is the
subsequent chapter on modelling process and findings that delineates the process followed for
the selection of specific indicators.
CHAPTER FOUR – METHODS

This study employed a retrospective cross-sectional survey design to examine relationships between sexual harassment victimization, other school-based microstressors, and health among adolescent females. Data were obtained through self-report questionnaires administered to high school students in the classroom, and structural equation modelling was used to test the proposed theoretical model. This chapter describes the sampling and recruitment process, ethical issues related to the protection of human subjects, operational definitions of the constructs (instrumentation), and methods of data collection and analysis.

Sample

Setting and Participants

The sample consisted of male and female English speaking secondary school students in Grades 9 through 11, drawn from 8 schools in British Columbia and 4 schools in New Brunswick. This mid-adolescent age period (approximately 14 to 17 years) was selected because the students are in a stage of their life cycle that is characterized by multiple stressors or a 'stress pile-up' (Newcomb et al., 1981; Windle, 1992), and because of the importance of peer relationships at this time (Crockett & Petersen, 1993; Strauss & Clarke, 1996). Secondary schools were selected as the setting for the study because of their moral and legal responsibility to ensure a harassment-free and nondiscriminatory environment. Peer harassment incurred at the shopping mall or other such places may have negative effects, but sexual harassment that is tolerated within the school's domain sends a powerful message to its students regarding appropriate social behaviours and the construction of gender.

Although generalizability or representativeness of the sample is one of the key issues in survey and correlational research, due to the sensitive nature of the topic and a history of certain
schools refusing to participate in similar research (e.g., British Columbia’s Adolescent Health Surveys), students were recruited as a non-probability sample from schools that were willing to serve as a site for this study. However, an effort was made to contact schools from a variety of communities in order to obtain diversity within the sample with regards to ethnicity, socioeconomic status, and size of school. The 12 schools that participated in the study were drawn from 3 school districts in British Columbia and 2 school districts in New Brunswick. The communities varied in size from 2,500 to 500,000 people, and the schools ranged in size from approximately 500 to 3000 students. Both larger urban and rural or small town schools were targeted in each province. Participants were recruited from classes selected by school staff, but an effort was made to situate the study within classes that drew from the school population as a whole; thus, 19 of the 31 participating classes were mandatory life skills classes. Most of the other classes were required core courses, such as English, and thus, class composition was not expected to represent a select population.

Sample Size

Determining an adequate sample size generally requires a consideration of power, effect size, and significance level. Determining sample size for SEM is less easily answered, however, than for other multivariate statistical procedures. It has been demonstrated that performance of fit indices is influenced by the interaction of sample size, model size, measurement level of the data, estimation method, and violations of the assumptions of normality and independence (Fan, Thompson, & Wang, 1999; Hu & Bentler, 1995; Hutchinson & Olmos, 1998; Yadama & Pandey, 1995). Computer programs have recently become available for power analyses and the calculation of sample size requirements (Kline, 1998; MacCallum, Browne, & Sugawara, 1996), but given that such programs are not yet widely available, I set a sample size target based on
simulation research about fit index performance. For example, there is evidence that many of the fit indices perform adequately at sample sizes of 200 when maximum likelihood or generalized least squares estimation methods are used, even with slight mis-specification of the model (Fan et al., 1999). In consequence, this study aimed for a sample of approximately 500 students, with roughly equal proportions of male and female students, so that analysis could be conducted on male or female sub-samples.

**Ethical Considerations**

The study was approved by the Behavioural Research Ethics Board at the University of British Columbia and by the appropriate school principal or school district superintendent prior to any data collection. Students were under 19 years of age and therefore required the written consent of their parent or guardian to participate. The student’s consent to participate was assumed if he or she completed the questionnaire on the day of the study. No student who returned the parental consent form was excluded from the study, although teachers were asked if they knew of any students who did not have adequate English reading skills to complete the survey.

Data were collected anonymously, and no identifying information was solicited through the questionnaire other than basic demographic information. In order to protect confidentiality, participants were given an envelope in which to seal the questionnaire before returning it to the researcher. They were also reminded that parents and school personnel would never see their responses, and that only grouped data would be reported. The questionnaires were labelled with only a case number, and identification of the school district. Individual schools will not be identified in any external reports.
Risks were expected to be minimal because participant involvement was limited to completing an anonymous questionnaire. Also, research findings suggest that the majority of high school students have experienced or witnessed many of the stressors that are identified in the questionnaire and, thus, most students were not expected to experience any undue embarrassment or emotional distress through exposure to the items. Participants were advised that they could leave blank any item that they did not wish to answer. However, because it is possible that the survey may have raised emotional discomfort for some students, particularly those who had experienced the more severe types of harassment, all participants received a statement encouraging anyone experiencing distress or wishing to talk about the research topic to see a school counsellor. This statement was included as part of an information package about peer harassment that was distributed at the end of the class (see Appendix A).

The study was not expected to directly benefit the participants, other than possibly raising their awareness about sexual harassment. However, a copy of "Flirting or Hurting: A Teacher's Guide on Student-to-Student Sexual Harassment in Schools" was given to each school that participated in the study (see Appendix B for content outline). Teachers and school counsellors were also given a list of references and resource materials relating to peer harassment among adolescents (see Appendix C). It was also suggested to the teachers in the participating classes that they might want to use the content as a springboard for their own class discussions of sexual harassment, bullying, stress management, or health-related behaviours such as sexual risk taking and substance use (as some of them reported doing in a later follow-up telephone conversation). A copy of the final dissertation report will be distributed to all participating school districts.
Recruitment of Participants

Recruitment was initiated by telephone with written follow-up to the school district superintendents and school principals. See Appendices D and E for samples of the correspondence seeking access to schools and the consent of the school principal and/or district superintendent. Eleven school districts were contacted; 5 agreed to participate. Within those 5 school districts, 12 out of the 14 schools contacted agreed to participate. After written consent had been received, and class access had been negotiated with the school principal, I spoke to the students in their class to explain the purpose of the study and seek their participation. The students were given a research information package containing a student recruitment letter, a cover letter to the parent/guardian outlining the purpose and procedures of the study and conditions for informed consent, and a parental consent form to be returned directly to the school (see Appendices F and G). Students who returned parental permission slips (with either an affirmative or negative response with respect to research participation) were eligible to win a $20.00 gift certificate, with one draw per class. Data were collected during the week following distribution of the information and consent package.

A total of 594 students from 31 classes participated in the study. Very few parental refusal slips were returned; the numbers of parental refusals per class ranged from 0 to 3 ($M$ and $Md = 1$). However, more students (0 – 10 per class) reported ‘forgetting’ to bring back the parental consent ($M = 3.4$, $Md = 2.0$); this could reflect ‘true’ forgetfulness or the student’s choice to not participate. In addition, some of the students who had returned parental consents were absent from class on the day of data collection. For example, 14 students were absent in one class due to an unexpected field trip. The participation rate per class enrollment ranged from 38% to 92%, with a mean of 72% and median of 78%. The participation rate per number of
students present on the day of data collection ranged from 57% to 100%, with a mean of 82% and median of 86%. Twenty questionnaires were excluded from the final sample because of missing data (8 from males and 12 from females), and 9 questionnaires from male students were excluded because of recognizable response sets (e.g., reporting that they had experienced all harassment behaviours on a daily basis).

**Demographic Characteristics of the Sample**

Table 1 presents the demographic characteristics of the sample. The final sample consisted of 565 students from grades 9 through 11; 62% of the participants were female (n = 348), and 38% were male (n = 217). Fifty-six percent of the sample were drawn from 8 schools in British Columbia (n = 319); 44% were drawn from 4 schools in New Brunswick (n = 246). Students in Grades 9, 10, and 11 accounted for 36%, 36%, and 28% of the sample, respectively. Although there was no significant difference in gender by grade, $\chi^2(2, N = 565) = 3.30, p = .19$, or gender by province, $\chi^2(1, N = 565) = 0.621, p = .43$, the grade distribution varies significantly by province. In British Columbia, Grade 10 students accounted for 59% of the provincial sub-sample, whereas in New Brunswick, Grade 10 students accounted for only 6% of the provincial sub-sample, $\chi^2(2, N = 565) = 179.52, p < .001$.

The majority of the participants were born in Canada (90%) and described themselves as White/Caucasian (86%). Although there was no significant difference in the proportion of immigrants by province, $\chi^2(1, N = 565) = 0.59, p = .44$, there was a statistically significant difference in the ethnic background of participants, by province, $\chi^2(3, N = 559) = 13.63, p < .01$. In British Columbia, 10.2% of the respondents described themselves as having Asian heritage, compared with 2.8% of the respondents in New Brunswick; a reflection of the level of ethnic diversity in each province.
Table 1
Demographic Characteristics of the Sample

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Female n = 348</th>
<th>Male n = 217</th>
<th>Total N = 565</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n %</td>
<td>n %</td>
<td>n %</td>
</tr>
<tr>
<td>Province</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>British Columbia</td>
<td>201 58%</td>
<td>118 54%</td>
<td>319 56%</td>
</tr>
<tr>
<td>New Brunswick</td>
<td>147 42%</td>
<td>99 46%</td>
<td>246 44%</td>
</tr>
<tr>
<td>Grade</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nine</td>
<td>123 35%</td>
<td>80 37%</td>
<td>203 36%</td>
</tr>
<tr>
<td>Ten</td>
<td>118 34%</td>
<td>85 39%</td>
<td>203 36%</td>
</tr>
<tr>
<td>Eleven</td>
<td>107 31%</td>
<td>52 24%</td>
<td>159 28%</td>
</tr>
<tr>
<td>Born in Canada</td>
<td>312 90%</td>
<td>195 90%</td>
<td>507 90%</td>
</tr>
<tr>
<td>Ethnic heritage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White/Caucasian</td>
<td>299 87%</td>
<td>183 85%</td>
<td>482 86%</td>
</tr>
<tr>
<td>Asian</td>
<td>20 6%</td>
<td>19 9%</td>
<td>39 7%</td>
</tr>
<tr>
<td>First Nations</td>
<td>11 3%</td>
<td>6 3%</td>
<td>17 3%</td>
</tr>
<tr>
<td>Other</td>
<td>13 4%</td>
<td>8 4%</td>
<td>21 4%</td>
</tr>
</tbody>
</table>

Data Collection

Data were collected through self-report questionnaires administered in secondary school classrooms between April, 1998 and January, 1999. Administering the questionnaire in a group setting was intended to increase the response rate. The questionnaires were administered by the researcher and an assistant (a doctoral student in Educational Psychology) according to a written protocol (see Appendix H). During data collection, the researcher and/or assistant circulated in the classroom to answer questions about individual items and reminded students to not discuss their answers with others. Teachers generally remained in the classroom, but were asked to stay where they could not see the responses.

Filling out the questionnaires took most students 25 to 30 minutes. Students who were taking considerably longer than their peers to complete the survey were asked if they wished to complete the survey or to hand it in only partially complete. This was done in order to not draw undue attention to any learning disabilities that the student may have, or create hardship for the
student, and pertained to approximately one student per class. Almost all students in this situation chose to complete the survey and finished within the allotted class time. Thus, questionnaires that were identified as largely incomplete and screened out of the study were not necessarily attributable to students with reading difficulties. Furthermore, most of the unusable questionnaires had a variety of scales that were left completely blank, scattered randomly throughout the questionnaire, suggesting a lack of interest in the questions being asked. All teachers were very cooperative with the study, and reminded students that they were welcome to use the entire class time for the survey, if necessary. After everyone or almost everyone had completed and returned the questionnaires, the draw was made for the gift certificate and debriefing material in the form of educational and referral information was distributed to the participants.

A pilot test of the study was conducted in April 1998 in order to establish the feasibility and acceptability of the proposed data collection methods, and to determine that the instrument captured sufficient variance for the proposed statistical analyses. Data were collected from 66 students in Grades 9 through 11 at one high school in the Lower Mainland area of British Columbia. Analysis of the survey data and field notes regarding recruitment, participation rates, the time required to collected data, and student and investigator behaviours during data collection did not suggest that any revisions were necessary. Thus, data from the pilot study were included in the full study.

Instrumentation

The questionnaire included 11 instruments and a set of demographic questions. Where possible, scales were selected based on their wide use in health or social science research and their sound psychometric properties. These included measures of coping with sexual
harassment, depression, self-worth, physical health effects, and social desirability. Sexual harassment was measured with a scale that had been developed specifically for an adolescent population, but field tested in only one prior study. Instruments measuring the school’s tolerance for sexual harassment, other school-based microstresses, safety at school, and the student’s health-related behaviors were compiled by researcher, although many of the items were drawn, with permission, from other surveys.

The primary objective of the questionnaire was to obtain interval-level scores to represent relative amounts of each construct. Most of the items in the questionnaire were closed-ended and had a Likert-type response format in which the respondent indicated the frequency of certain experiences or behaviors, or the extent to which the item applied to his or herself. The time period of interest for all of the scales except self-worth and depression was set at 2 months. Although the duration of stress effects remains uncertain (Aldwin, 1994), this time period was expected to be long enough to capture sufficient variability in the stressor and yet short enough to facilitate accurate recall and to capture the possible health outcomes of microstresses which may be of limited duration. The questionnaire was 26 pages in length (see Appendix I).

**Adolescent Sexual Harassment**

Peer sexual harassment victimization was assessed with the Adolescent Sexual Harassment (ASH) scale which was developed by White (1997) as a revision of the AAUW (1993) scale. The ASH was selected because it was developed specifically for an adolescent population and was designed to overcome many of the limitations of previously existing instruments. Many of the earlier instruments were not theoretically grounded; failed to sample fully from all sexual harassment domains; were not written in behavioral terms, thus rendering the items open to multiple interpretations by respondents; and lacked an investigation or
demonstration of their reliability and validity (Fitzgerald, Swan, & Magley, 1997; Fitzgerald, Gelfand, & Drasgow, 1995; White, 1997). White reported that validity for the ASH was sought by basing the items on harassment behaviours that are described in detail within the qualitative literature and on his experiences as a facilitator of sexual harassment prevention workshops in schools.

The factor structure of the ASH was first investigated with data collected from 373 first-year university students who were asked about harassment experiences that occurred during their last year of high school (White, 1997). Not surprisingly, White found some variation in the factor structure of the instrument according to the sex of the respondent, and between perpetration behaviours and victimization. In the field test, three fairly clear factors emerged for perpetration by males. These were identified as Gender Harassment, Inappropriate Sexual References and Advances, and Sexual Imposition Assault; and accounted for 50% of the variance in the scores. However, 51% and 40% of the variance in harassment victimization among males and females was explained by a two-factor solution: Gender Harassment and a second factor consisting of the remaining items of a more sexual nature. Internal consistency was high for the total scale (with Cronbach alphas of .86 for females and .90 for males) but was somewhat lower for the subscales (.66 and .86 among the female students, .78 and .88 among the male students). In a later study of sexual harassment perpetration among university students aged 18 to 21 years, White (2001) used the ASH as a two-factor instrument, with the factors labelled as Gender Harassment (9 items) and Sexual Advances Imposition (9 items); one item (flashed or mooned you) had been dropped due to cross-loading.

In this study, principal components analysis with oblique rotation yielded an almost identical two-factor solution that explained 46% and 43% of the variance in responses by female
and male students, respectively. There was a moderate correlation between the two components for the females (.38), but a lower correlation of .22 for the males. Three items dropped out of the solution due to cross-loading or factor loadings of less than .30, leaving 7 items in the Gender Harassment subscale and 9 items in the Sexual Advances/Imposition subscale. Gender Harassment includes sexist remarks that demean a person on the basis of his or her gender (e.g., made negative comments about your body suggesting that you don’t look masculine or feminine enough, called you gay or lesbian) and may serve to enforce conformity to stereotypical gender roles. The second factor, Sexual Advances/Imposition, includes inappropriate and unwanted references to sexuality (e.g., sexual gestures), inappropriate and unwanted sexual advances (e.g., followed you around or pestered you for a date after you said you weren’t interested), as well as physically intrusive behaviours (e.g., blocked your way or cornered you in a sexual way, forced you to do something sexual…). An analysis of the internal consistency of the subscales yielded Cronbach alpha values of .75 for females and .62 for males for the Gender Harassment factor, and .86 for the Sexual Advances/Imposition subscale for both males and females. The reliability estimate obtained for the overall scale was .86 for females and .81 for males, thus supporting the notion that the two factors are correlated. The items and the factor loadings obtained in this study are presented in Tables 2 and 3.

The ASH victimization scale (White, 1997) required respondents to identify how frequently they had been the target of certain unwanted behaviours by their peers during their last year of high school, using a 6-point scale ranging from 0 (never) to 5 (daily or almost daily). The ASH items and response scale were used intact in this study, but additional questions were asked to investigate the target’s cognitive appraisal of the event and to identify the gender of the perpetrator(s); the recall period was limited to the prior 2 months (see Part K of Appendix I).
Table 2
Factor Loadings for the ASH among Female Students

<table>
<thead>
<tr>
<th>Item content</th>
<th>Factor 1</th>
<th>Factor 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Spread sexual rumors or wrote sexual graffiti about you on bathroom walls or hallways etc.</td>
<td>.373</td>
<td></td>
</tr>
<tr>
<td>2. Called you lesbian (gay) or something similar.</td>
<td>.610</td>
<td></td>
</tr>
<tr>
<td>3. Made negative comments about your body suggesting that you don’t look feminine (masculine) enough.</td>
<td>.846</td>
<td></td>
</tr>
<tr>
<td>4. Made fun or you or called you names for having too much (not having enough) sexual experience. *</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Teased you about having PMS or your period (your hormones, e.g., your testosterone level).</td>
<td>.457</td>
<td></td>
</tr>
<tr>
<td>6. Called you a name like ‘butch’ etc. (girl, wimp, etc.) suggesting that you are not feminine (masculine) enough.</td>
<td>.782</td>
<td></td>
</tr>
<tr>
<td>7. Put down females (males) in general.</td>
<td>.405</td>
<td></td>
</tr>
<tr>
<td>8. Gave you an unwelcome or crude compliment about your body or parts of your body.</td>
<td>.782</td>
<td></td>
</tr>
<tr>
<td>9. Showed you a sexual cartoon or picture or told you a sexual joke that you didn’t want to see or hear. *</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Flashed or “mooned” you. *</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Made a sexual gesture or stared at your body in a sexual way.</td>
<td>.803</td>
<td></td>
</tr>
<tr>
<td>12. Followed you around or pestered you for a date after you said you weren’t interested.</td>
<td>.585</td>
<td></td>
</tr>
<tr>
<td>13. Yelled something sexual or whistled or howled at you when you walked by.</td>
<td>.756</td>
<td></td>
</tr>
<tr>
<td>14. Touched, grabbed, or pinched you in a sexual way.</td>
<td>.819</td>
<td></td>
</tr>
<tr>
<td>15. Stood too close or brushed up against you in a sexual way.</td>
<td>.798</td>
<td></td>
</tr>
<tr>
<td>16. Pulled at your clothing in a sexual way or pulled your clothing down or off.</td>
<td>.687</td>
<td></td>
</tr>
<tr>
<td>17. Blocked your way or cornered you in a sexual way.</td>
<td>.636</td>
<td></td>
</tr>
<tr>
<td>18. Kissed or hugged you when you didn’t want them to.</td>
<td>.554</td>
<td></td>
</tr>
<tr>
<td>19. Forced you to do something sexual other than kissing or hugging.</td>
<td>.498</td>
<td></td>
</tr>
</tbody>
</table>

Eigenvalues

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5.408</td>
<td>1.942</td>
<td></td>
</tr>
</tbody>
</table>

% of variance explained

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>33.80</td>
<td>12.14</td>
</tr>
</tbody>
</table>

*Note. Total n = 348. *loadings < 0.30 and cross-loadings have not been presented.
Table 3
Factor Loadings for the ASH among Male Students

<table>
<thead>
<tr>
<th>Item content</th>
<th>Factor 1</th>
<th>Factor 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Spread sexual rumors or wrote sexual graffiti about you on bathroom walls or hallways etc.</td>
<td>.336</td>
<td></td>
</tr>
<tr>
<td>2. Called you lesbian (gay) or something similar.</td>
<td>.573</td>
<td></td>
</tr>
<tr>
<td>3. Made negative comments about your body suggesting that you don't look feminine (masculine) enough.</td>
<td>.629</td>
<td></td>
</tr>
<tr>
<td>4. <em>Made fun or you or called you names for having too much (not having enough) sexual experience.</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Teased you about having PMS or your period (your hormones, e.g., your testosterone level).</td>
<td>.438</td>
<td></td>
</tr>
<tr>
<td>6. Called you a name like 'butch' etc. (girl, wimp, etc.) suggesting that you are not feminine (masculine) enough.</td>
<td>.777</td>
<td></td>
</tr>
<tr>
<td>7. Put down females (males) in general.</td>
<td>.373</td>
<td></td>
</tr>
<tr>
<td>8. Gave you an unwelcome or crude compliment about your body or parts of your body.</td>
<td>.727</td>
<td></td>
</tr>
<tr>
<td>9. <em>Showed you a sexual cartoon or picture or told you a sexual joke that you didn't want to see or hear.</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. <em>Flashed or &quot;mooned&quot; you.</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Made a sexual gesture or stared at your body in a sexual way.</td>
<td>.711</td>
<td></td>
</tr>
<tr>
<td>12. Followed you around or pestered you for a date after you said you weren't interested.</td>
<td>.619</td>
<td></td>
</tr>
<tr>
<td>13. Yelled something sexual or whistled or howled at you when you walked by.</td>
<td>.773</td>
<td></td>
</tr>
<tr>
<td>14. Touched, grabbed, or pinched you in a sexual way.</td>
<td>.858</td>
<td></td>
</tr>
<tr>
<td>15. Stood too close or brushed up against you in a sexual way.</td>
<td>.882</td>
<td></td>
</tr>
<tr>
<td>16. Pulled at your clothing in a sexual way or pulled your clothing down or off.</td>
<td>.785</td>
<td></td>
</tr>
<tr>
<td>17. Blocked your way or cornered you in a sexual way.</td>
<td>.664</td>
<td></td>
</tr>
<tr>
<td>18. Kissed or hugged you when you didn't want them to.</td>
<td>.451</td>
<td></td>
</tr>
<tr>
<td>19. Forced you to do something sexual other than kissing or hugging.</td>
<td>.403</td>
<td></td>
</tr>
</tbody>
</table>

Eigenvalues

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4.676</td>
<td>2.272</td>
</tr>
</tbody>
</table>

% of variance explained

|                  | 29.23   | 14.20   |

Note. Total \( n = 217 \). *Loadings < 0.30 and cross-loadings have not been presented.*
There are three parts to the revised Adolescent Sexual Harassment (ASH-R) scale. The ASH-R first asks respondents “how often, if at all, has one of your peers done the following things to you when you did not want them to, even if they were just teasing?” during school-related times. School-related times were clearly identified as “when you’re in school or on school grounds during the school day and after the school day ends, for example, at a sports activity in the evening; when you’re on your way to school or on your way home; and when you’re on a school trip”. For each item, the ASH-R then asks, “if this has happened to you, how stressful or how upsetting was this for you?”, using a 5-point response scale ranging from 0 (not upsetting) to 4 (very upsetting). The appraisal component of the ASH-R was derived from other adolescent stress scales which assess the severity of the stressor (e.g., Bagley, 1992; Bobo et al., 1986; Byrne et al., 1995) or the desirability of the event (Compas et al., 1987; Wagner et al., 1988), either alone or in combination with an assessment of its frequency.

The questionnaire also asks how frequently the respondent has been “sexually harassed”, although the 19 items on the ASH are not identified as sexual harassment. This approach to assessing sexual harassment experiences was taken to avoid problems stemming from students’ lack of knowledge about what constitutes sexual harassment, and to reduce social desirability response sets, but it also allowed an examination of students’ labelling of sexually harassing behaviours.

### School Stressors

A 14-item scale to measure other school-based microstressors was developed by the investigator (see Part B of Appendix I). Items were derived from several published adolescent stress scales including the Adolescent Perceived Events Scale (Compas et al., 1987; Grant & Compas, 1995; Wagner et al., 1988), the Adolescent Hassles Inventory (Bobo et al., 1986),
Adolescent Stress Questionnaire (Byrne et al., 1995), and the Adolescent Stress Scale (Bagley, 1992). The published scales are not specific to school-based stressors. They are also longer instruments (with 40, 50, 68, and 100 items each), and generally include items that would confound with the outcome variables in this study (e.g., worries about health). Items in the School Stressors Scale relate primarily to concerns about school performance and relationships with teaching staff, issues which may be categorized as daily hassles/minor events or chronic strain. Performance concerns include items such as having to read aloud or talk in front of the class and keeping up with others in the class. Items related to relationships with teaching staff include having problems/arguments with teachers or principal and having teachers favour other students. Almost all of the selected items were used intact, with only a few, minor wording changes.

There were two parts to the School Stressors Scale, an evaluation of frequency, and a cognitive appraisal of the event. Consistent with the sexual harassment scale, the School Stressors Scale first asked respondents to indicate how frequently over the last 2 months that each item had been a concern or problem, and then asked how stressful or upsetting each item was, if it had happened to the respondent. For frequency, responses were selected from a 6-point Likert scale ranging from never to daily or almost daily. The 5-point response scale for appraisal ranged from 0 (not stressful) to 4 (very stressful). Thus, higher scores indicate more frequent experiences of school-based stressors and a higher level of upset. The frequency scores were summed only to compare levels of reported stress for male and female students; selected items rather than a scale total were used in the modelling procedures. Although it is possible that there may be two factors to this scale, factor analyses of the Adolescent Perceived Events Scale (the best tested of the published instruments) and the Adolescent Hassles Inventory have found that
both types of concerns (i.e., school performance and relationships with teaching staff) load on a single factor. In this study, the total scale was found to have high levels of internal consistency, with $\alpha = 0.82$ for female students and $\alpha = 0.84$ for males students (with most items showing a item-to-total scale correlation between 0.30 and 0.60) and factor analysis was not pursued.

**Perceived Tolerance for Sexual Harassment**

Three items, developed by the investigator, assessed respondents' perceptions of their school's tolerance for sexual harassment (Part M of Appendix I). The first item asks respondents to indicate how satisfied they were with the steps that their school has taken to prevent the behaviours described in section K. The other two items ask respondents' opinions about their school's efforts to stop the behaviours and the school's response to complaints. Thus the scale was intended to capture antecedent, concurrent, and subsequent interventions of the school with respect to the sexual harassing behaviours of students. A 7-point Likert response scale was used for each item, ranging from *strongly agree* (1) to *strongly disagree* (7). Scoring was then reversed so that higher scores indicate a perception of greater tolerance (i.e., less school intervention) of sexual harassment. Reliability analyses resulted in alpha coefficients of 0.81 for females and 0.83 for males, with item-to-total scale correlations ranging between 0.59 and 0.73. These items were not included within the model, but were used to gather a more comprehensive representation of school climate, and may be used in future analysis.

**Coping with Harassment**

Cognitive and behavioural responses to sexual harassment were assessed with a 12-item shortened and revised form of the original 50-item Coping with Harassment Questionnaire (CHQ; Fitzgerald et al., 1988; Fitzgerald, 1996) which was developed for use with an adult population. The CHQ was originally conceptualized as an assessment of *internal* and *external*
strategies for responding to sexual harassment (parallel to the problem versus emotion focussed
approach of Lazarus & Folkman, 1984). The ten strategies include detachment, denial,
endurance, relabelling, illusory control or blame, appeasement, avoidance, seeking social
support, confrontation, and seeking organizational relief. Although early analyses found internal
reliability coefficients in the mid-70s for the two-factor scale (Fitzgerald, 1996), in later work,
Magley and Fitzgerald (1996) suggested that coping with sexual harassment be reconceptualized
along a two-dimensional structure of cognitive/behavioural strategies and approach/avoidance
(i.e., degree of assertiveness). Their multidimensional scaling of the responses of women in five
studies revealed four clusters of items which may be categorized as cognitive-avoidance
(detachment, denial, and endurance strategies), cognitive-approach (blame, relabelling, and
appeasement), behavioural-approach (confrontation and seeking institutional relief), and
behavioural-avoidance (avoidance and social support) aspects of coping.

Eleven items were selected from the CHQ, drawing from each of the ten coping
strategies (see Part L of Appendix I). Although the items selected were those judged to be most
appropriate to the adolescent population, some revisions were necessary to make the items
appropriate to both sexes and the school environment. For example, the original item I told a
supervisor or department head was revised to read I told a teacher or other school staff member.
Items such as I figured he must really like me became I figured he or she must really like me.
For another, the two items I made up some story so he'd leave me alone and I just joked around
with him and hoped he'd leave me alone were combined to provide a more comprehensive item
reflecting appeasement. Shortened formats of 10, 11, and 21 items have been used by other
harassment researchers (Magley & Fitzgerald, 1996; Schneider & Swan, 1994; Schneider et al.,
1997; Swan, 1996). Consistent with Schneider and Swan's (1994) study, two items were drawn
from the category of seeking institutional relief in order to capture both formal and informal complaints. Finally, a twelfth item was added to the scale to inquire about other responses that may not have been otherwise captured. Responses were content analyzed and included with the other items as appropriate. For example, the response, “It was not a big deal for me” was included in the responses to item number one, *I told myself it wasn’t really important*. The response, “Worked it out for myself, after I spoke with friends for help” was consider equivalent to item number eight, *I talked to my friends for understanding and support*. Internal consistency for the 11-item scale in this study was found to be fairly low, with $\alpha = .64$ for female students and $\alpha = .76$ for male students.

Various response formats have been used with the CHQ, including the dichotomous *yes/no* response (Swan, 1996). The response format for this study was a 5-point scale to indicate how frequently (*never* to *all or almost all of the time*) the participant utilized each strategy in response to the harassment behaviours identified in Part K. This format was used because of evidence suggesting that adult harassment victims tend to use a combination of responses and that they use different responses to varying degrees (Fitzgerald, 1996; Schneider et al., 1997).

**Safety at School**

Five items asking about the students’ perceptions of their personal safety and that of their personal belongings were drawn from the Alberta Youth and Family Lifestyle Survey (Bertrand et al., 1994). (See Parts I and J of Appendix I.) These variables were not included within the model, but may be used in future analyses to provide a more comprehensive representation of student life and school climate.

**Centre for Epidemiologic Studies – Depression scale (CES-D)**

The CES-D is a self-report instrument developed at the Center for Epidemiologic Studies
at the US National Institute of Mental Health to measure depressive symptomatology among adults in the community (Radloff, 1977). However, psychometric evaluations of the scale also support its use with non-clinical samples of adolescents (e.g., Dumenci & Windle, 1996; Gore et al., 1993; Radloff, 1991; Roberts, Andrews, Lewinsohn, & Hops, 1990; Schoenbach, Kaplan, Wagner, Grimson, & Miller, 1983). The CES-D is intended for use in epidemiologic research and is not intended to produce a clinical diagnosis of depression (Radloff, 1991). The CES-D consists of 20 items that ask respondents how frequently they have experienced each feeling during the past week (see Part F of Appendix I). The response format is a 4-point scale ranging from “0” (rarely or none of the time, i.e., less than one day) to “3” (all or most of the time, i.e., 5-7 days), with four of the items requiring reverse scoring (items 3, 5, 11, 16). Possible scores for the total scale range from 0 – 60, with higher scores indicating higher levels of depressive symptoms.

The CES-D is often used to obtain an overall depression score by summing the 20 items, a practice which is suggested by tests of internal consistency with both adult and adolescent populations. In a large sample of 1,208 students from grades 9 through 11, Gore et al. (1993) obtained an alpha of .89 for the total scale, very similar to that reported by Radloff (1977) for the general adult population. These findings are also consistent with estimates of internal consistency for other adolescent populations as reported by Schoenbach et al. (1983) in their study of depression among junior high school students (α = .85, N = 384), Radloff’s (1991) study of high school students (α = .86, N = 317) and work by Roberts et al. (1990) which found alpha coefficients above .87 for all subgroups of 2,000 Oregon high school students in grades 9 through 12. In this study, the total scale was found to have high levels of internal consistency, with α = .90 for female students and α = .84 for male students.
There is evidence, however, of dimensionality within the CES-D. Radloff (1977, 1991) identified four factors, with 2, 4, 5, and 6 items in the interpersonal, positive or happy affect, negative or depressed affect, and somatic complaints subscales, respectively. Sheehan, Fifield, Reisine, and Tennen's (1995) exploration of the measurement structure, using structural equation modelling with data obtained from an adult population, found that a single factor model fit the data adequately when measured at a single point in time, but that the four-factor model and a second-order, single-factor model demonstrated a superior fit when depression was measured over three points in time. They also found that, in the second-order factor model, negative affect contributed the most information to the second-order factor, in contrast to the other three first-order factors.

Studies among adolescents have demonstrated a significant gender effect, with proportionately more females than males reporting depressive symptoms (Gore et al., 1993; Roberts et al., 1990), but little difference in the saliency of the CES-D symptoms (Roberts et al.). With respect to age, Radloff (1991) has suggested that “the scores of the junior high school group (grades 7, 8, 9) may be inflated by an excess of transient symptoms and should be interpreted with caution, but the scale seems to be very suitable for the high school and older groups” (p. 149). Also, of critical importance to its utilization in this study, is the finding by Dumenci and Windle (1996) that, although the CES-D is a fairly stable measure of trait depression over time, it is also a reliable measure of state depression. Testing a latent trait-state model of adolescent depression using structural equation modelling, they found that the “general trait and state depression components accounted for approximately equal portions of reliable variance” (p. 326) as measured across four time points over an 18 month time period.
Physical Health Effects

This 8-item scale measures somatic (i.e., bodily) complaints only; it does not measure diagnosed illness or any changes in physiology (see Part C of the Appendix I). Seven of the items were drawn, with permission, from the well-tested Alberta Youth and Family Lifestyle Survey (Bertrand et al., 1994). One item was added, based on the findings of Dubow et al. (1990) with regards to the most prevalent and troubling health problems experienced by high school students (i.e., experiencing diarrhea or constipation). The items are consistent with the physiological outcomes of stress identified by high school students in a study by Omizo et al. (1988). There is a 5-point response scale ranging from 0 (seldom or never) to 4 (most days), with higher scores indicating higher levels or more frequent somatic complaints during the last two months. Satisfactory internal consistency was found, with alpha coefficients of .78 for females, and .75 for males.

Self-Worth

Harter's (1988) Self-Perception Profile for Adolescents (SPPA) in grades 9 through 12 is a 45-item multidimensional self-report instrument designed to measure nine domains: scholastic competence, athletic competence, physical appearance, social acceptance, behavioural conduct, job competence, close friendship, romantic appeal, and global self-worth. Only the latter subscale, with 5 items, was used in this study (see Part D of Appendix I). The Global Self-Worth subscale is intended to measure “a global judgment of one’s worth as a person, rather than domain-specific competence” (Harter, p. 3). The main reason for selecting this instrument was its short length coupled with satisfactory reliability.

The original SPPA utilizes a unique two-step question format that can be confusing for respondents. To avoid this possible problem, I used a revised version of the SPPA (Wichstrøm,
1995) which has a simplified question format. The original format asks respondents to first choose between two self-descriptive statements and then to select an option indicating how well the statement describes them. The revised format uses only the first half of Harter’s self-descriptive statements; for each statement, the respondent selects his or her response from a 4-point scale ranging from 1 (describes me very poorly) to 4 (describes me very well). Higher scores indicate a higher or more positive self-judgement (with items 1 and 2 reverse-scored).

Although there are few reports on the psychometric properties of the SPPA, the SPPA is an adaptation of Harter’s Self-Perception Profile for Children (SPPC) which has been widely used and tested internationally (Van Dongen-Melman, Koot, & Verhulst, 1993). Harter (1988) has noted that the two scales are so similar in structure and content that subscale scores may be compared across the two versions. Harter reported Cronbach alphas ranging from .80 to .88 for Global Self-Worth among four different samples during initial psychometric testing. These figures are quite high given that the subscale is comprised of only five items. Wichström (1995) reported lower alpha coefficients for the original (.68) and revised (.77) subscales. No test-retest reliability coefficients were found for either the original or revised SPPA, although Van Dongen-Melman et al. (1993) report 4-week test-retest correlations ranging from .66 to .83 for the SPPC.

The factor analysis results reported by Harter (1988) indicate that the domain-specific subscales clearly reflect separate factors. The test manual reports no research findings related to criterion or construct validity, although Harter cites several earlier published articles in which she provided the rationale and evidence for a domain-specific approach. Wichström (1995) found that the revised Global Self-Worth subscale correlated in the expected directions with measures of psychological problems (-.43) and quality of life (.46), thus providing evidence of
its divergent and convergent validity. In this study, internal consistency of the SPPA-R was found to be satisfactory among both male and female respondents, with $\alpha = .76$ and .86, respectively.

**Marlowe-Crowne Social Desirability Scale – Short Form C**

This 13-item scale was derived by Reynolds (1982) from the original 33-item Marlowe-Crowne Social Desirability Scale (MCSDS; Crowne & Marlowe, as cited in Reynolds) as a shorter measure of socially desirable response tendencies (see Part E of Appendix I). The instrument uses a true-false response format to items such as “I am always courteous, even to people who are disagreeable”. Using a sample of 608 undergraduate students, Reynolds found that the scores demonstrated an approximately normal distribution with no significant gender differences. Internal consistency, as measured by the Kuder-Richardson 20 reliability coefficient was found to be .76 and the mean item-scale correlation was .38. Reynolds also found a correlation of .93 with the long form of the Marlowe-Crowne, suggesting that the 13-item form is a valid alternative to the original scale. These findings were corroborated in a more recent psychometric evaluation by Fischer and Fick (1993). Using a sample of 390 Canadian undergraduate students, they found high internal consistency ($\alpha = .89$) and a very strong correlation ($r = .965$) with the standard form. In this study, internal consistency was found to be considerably lower, with alpha coefficients of .65 for males and .66 for females.

**Summary of Reliability Coefficients**

A summary of the reliability coefficients for all instruments is provided in Table 4. Two of the measures of internal consistency are less than the .70, which is generally considered the minimum acceptable value for research purposes (Polit, 1996).
### Table 4
Internal Consistency of Scales in the Survey Questionnaire

<table>
<thead>
<tr>
<th>Scale</th>
<th>No. of items</th>
<th>Females&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Males&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adolescent Sexual Harassment – Revised Format</td>
<td>16</td>
<td>.86</td>
<td>.81</td>
</tr>
<tr>
<td>Gender Harassment Subscale</td>
<td>7</td>
<td>.75</td>
<td>.62</td>
</tr>
<tr>
<td>Sexual Advances/Assault Subscale</td>
<td>9</td>
<td>.86</td>
<td>.81</td>
</tr>
<tr>
<td>School Stressors Scale</td>
<td>14</td>
<td>.82</td>
<td>.84</td>
</tr>
<tr>
<td>Perceived Tolerance for Sexual Harassment</td>
<td>3</td>
<td>.81</td>
<td>.83</td>
</tr>
<tr>
<td>Coping With Sexual Harassment-Revised Format</td>
<td>11</td>
<td>.64</td>
<td>.76</td>
</tr>
<tr>
<td>Center for Epidemiologic Studies Depression (CES-D)</td>
<td>20</td>
<td>.90</td>
<td>.84</td>
</tr>
<tr>
<td>Physical Health Effects</td>
<td>8</td>
<td>.78</td>
<td>.75</td>
</tr>
<tr>
<td>Self-Worth</td>
<td>5</td>
<td>.86</td>
<td>.76</td>
</tr>
<tr>
<td>Marlowe-Crowne Social Desirability Scale – Short Form C</td>
<td>13</td>
<td>.66</td>
<td>.65</td>
</tr>
</tbody>
</table>

<sup>a</sup> females: n = 348. <sup>b</sup> males: n = 217

**Health-Risk Behaviours**

Items reflecting health-compromising behaviours were drawn primarily from the Alberta Youth and Family Lifestyle Survey (Bertrand et al., 1994), and the first British Columbia Adolescent Health Survey (McCreary, 1993). The items in these two surveys had, in turn, been drawn largely from the other regional, national, and cross-national studies; thus they had been through extensive field testing. Additional items and minor changes in wording were derived from suggestions in the literature related to adolescent problem behaviours (Donovan & Jessor, 1985; Donovan et al., 1988; Fortenberry, Costa, Jessor, & Donovan, 1997; Wills, 1986; Wills & Filer, 1996).

The domains of interest for this study included tobacco, alcohol and drug use, and unhealthy weight management practices. The latter refers to the use of diet pills and steroids, as well as binge and purge behaviours. Condom use was located within the construct of health-
protective behaviours based on the structural modelling results of Fortenberry et al. (1997).

Fortenberry and colleagues found that, for both male and female high school students in grades 10 through 12 (N = 1,782), regular contraceptive behaviour, among sexually active youth, loaded best on the latent variable of health-protective behaviours rather than with other problem behaviours such as substance use.

There were a total of 13 items reflecting the health-risk behaviours of smoking (n = 3), alcohol use (n = 5), marijuana use (n = 2), and unhealthy weight control practices (n = 3). (See Parts G and H of the questionnaire.) Each set of questions involved skip patterns, so many respondents answered far fewer than the 13 items. Frequency and quantity of use was indicated on a 6-point scale, with higher values indicating a higher level of risk behaviours.

Reliability and validity are of concern when investigating illicit and other problem behaviours. However, in a study of approximately 3000 middle school (grades 10 to 12) and high school (grades 10 to 12) students, Siegel, Aten, and Roghmann (1998) found that 94% of the high school females and 86% of the high school males reported that they had been “very honest” or “completely honest” in responding to a questionnaire on their sexual behaviours. Honesty was assessed by two final items on the questionnaire. Other research has demonstrated the congruence between adolescent self-reports of problem behaviours, official police records, and reports of their peers (as cited in Donovan & Jessor, 1985). There is also evidence that self-reports of substance use are reliable and valid when the data collection is done under conditions of confidentiality (Murray & Perry, as cited by Wills & Filer, 1996). Thus, the efforts made to ensure confidentiality in this study were also intended to foster honest and accurate reporting (i.e., the anonymous reporting and use of sealed envelopes when returning questionnaires).
Health-Promoting Behaviours

The questionnaire contained eight items to assess the health-promoting behaviours of sleep (n = 1), exercise (n = 1), nutrition (n = 3), and condom use (n = 3). (See Part H of Appendix I.) These items were drawn from the Canada Health Promotion Survey (Statistics Canada, 1990) and suggestions in the literature (Fortenberry et al., 1997; Gillis, 1997; Griffen et al., 1993). Frequency of behaviours was assessed with a 5-point response scale ranging from 1 to 5, with higher values indicating a higher level of health-protecting behaviours.

Demographics

Demographic characteristics of the respondents were assessed with a set of seven items using a combination of open and closed formats (Part A of Appendix I). The demographic items measured included age, sex, grade, overall level of academic performance at school, length of time lived in Canada, primary language spoken at home, and ethnic or cultural background. The latter was assessed by having respondents circle one of the options or complete the category “other”. The categories included are those identified by school personnel at a Vancouver secondary school and used in another study of adolescent development (K. Schonert-Reichl, personal communication, February 1998). The other demographic items were derived from the Alberta Youth and Family Lifestyle Survey (Bertrand et al., 1994) and suggestions from the literature (Donovan et al., 1988).

Data Analysis

The aim of this study was to expand our knowledge of the sexual harassment experiences of adolescents. The primary objective was to test a theoretical model which posits that school-based peer sexual harassment functions as a stressor with detrimental health sequelae. The data collected in this study were analyzed using Statistical Packages for the Social Sciences (SPSS)
and LISREL 8.30 (Jöreskog & Sörbom, 1999). Gender-specific, univariate and bivariate statistics were calculated to describe the characteristics and experiences of the participants; these are presented in Chapter 5. The structural equation modelling (SEM) results are presented in Chapter 6.

Missing Data

A combination of methods was used for dealing with missing data, according to the recommendations of Knapp (1998). Twenty cases that were missing more than 10% of the total items were screened out of the sample, 8 from male respondents and 12 from female respondents. When cases were missing 10% or fewer items from a scale, the missing data were replaced with the gender-specific modal value for that scale. The only exception to the 10% rule applied to the two shorter scales, the Self-Perception Profile and Physical Health Effects scale which consisted of 5 items and 8 items, respectively. For these two scales, an imputed modal value was permitted if only one item on the scale had a missing value. Replacing random missing data with a mean or modal value is a conservative approach, but it reduces both the variance of the variable and its correlation with other variables (Tabachnick & Fidell, 1996). Finally, because these two approaches yielded a data set that still contained some missing data, listwise deletion was employed in the structural equation modelling procedures to avoid obtaining a non-positive covariance matrix and to facilitate convergence (Kline, 1998; Schumacker & Lomax, 1996; Schutz, 1999).

Other Data Screening

Data were screened for univariate outliers by examining the gender-specific histograms and box-plots for all scale totals. This, combined with an examination of the frequency distributions of z scores for all variables, led to the identification of nine cases that strongly
suggested response bias in the sexual harassment items. The nine cases involved male
participants who reported that they had experienced all or almost all harassment behaviours on a
daily basis, and that the perpetrators had been male; these cases were deleted from the sample.
Most items in the sexual harassment frequency scale showed a positive skewness, but this was
not unexpected, and the one case that did emerge as an extreme outlier on the total sexual
harassment scale (per box plot analysis) was not deleted or massaged because it was not
discontinuous with the other “high value” cases (Tabachnick & Fidell, 1996).

All variables were examined for normality, and square root transformations were
performed as necessary for variables that were used in the structural equation modelling (details
are provided in Chapter 6). Selected pairs of variables included in the model were examined for
linearity and homoscedasticity through the use of bivariate scatterplots and found to be adequate
(i.e., the school-stressor and sexual harassment variables were paired with all of the health
outcome variables of interest). Finally, zero-order correlations were used to screen for
multicollinearity among the measurement variables used in the model, and (except for one value
at .71, which was nonetheless retained) were found to be satisfactory according to the cut-off
criteria of .70 recommended by Tabachnick and Fidell (1996). Multicollinearity can also cause
the structural equation modelling analysis to fail (Kline, 1998).

**Structural Equation Modelling**

Structural equation modelling (SEM), sometimes called covariance structure analysis, is
a multivariate statistical procedure which permits the researcher to simultaneously test a series
of hypotheses (i.e., the model) that specify the theorized relationship between the variables in
the analysis. The specified relationships may be recursive (i.e., one way) or nonrecursive (i.e.,
bi-directional). SEM serves to statistically isolate the effect of certain variables without
experimentation and random assignment to provide a necessary (but singularly insufficient) basis for causal inferences from correlational data (Hoyle, 1995; Ratner, Bottorff, & Johnson, 1998). SEM cannot indicate directionality nor prove causality; it can only provide guidance to the researcher in assessing whether or not the data are consistent with the hypothesized model. Other advantages of SEM are that it does not assume perfect measurement, or that all relevant variables are included in the model. As such, it is appropriate for analyzing data from surveys, experiments, quasi-experimental designs, and longitudinal studies (Ratner et al., 1998). LISREL, developed by Jöreskog and Sörbom, has been the most commonly used statistical program for estimating structural equation models (Kelloway, 1998).

**SEM Process.** There are five main tasks to the process of SEM: model specification, identification, estimation, evaluation of the fit of the model, and modification of the model (Hoyle, 1996; Schumacker & Lomax, 1996). There are, however, two different approaches to these tasks: the traditional two-step approach which separates the development and testing of the structural model from that of the measurement model (Anderson & Gerbing, 1988; James, Mulaik, & Brett, 1982), and the one-step approach which estimates and tests the measurement and structural aspects of the model simultaneously (Hayduk, 1987, 1996). The measurement model specifies the hypothesized relationships between each latent (unobserved) variable and its indicators (i.e., the manifest or observed variables), as well as the correlations between the latent variables, and the correlations among the error terms associated with the manifest variables. The structural model specifies the hypothesized relationships between latent variables. This study followed the more traditional two-step approach that is supported by Jöreskog and Sörbom (1996) and has commonly been used in sexual harassment, bullying, and stress-health research (e.g., Craig, Peters, & Konarski, 1998; Fitzgerald, Drasgow, et al., 1997; Glomb, Richman,
SEM begins with model specification and identification. In the structural model, latent variables are identified as being either *exogenous*, influenced by variables outside of the model, or *endogenous*, influenced by variables within the model. The hypothesized relationships between variables are commonly represented by path diagrams as presented in Figure 1 (Chapter 3). The model is formulated according to the researcher's theory or previous research in the area but there must be sufficient information (identification) if one is to find a unique solution for each of the parameters specified by the model. Identification refers to the correspondence between the number of parameters to be estimated and the number of data points in the sample covariance matrix, and is also dependent upon a scale being established for each factor (Hoyle, 1996; Schumacker & Lomax, 1996).

After the model has been identified, the parameters of the model (i.e., partial regression coefficients) are estimated from the sample data. A variety of estimation methods are available, with their selection depending upon the qualities of the observed data and size of the sample. For example, weighted least squares estimation (WLS) is recommended for use with non-normal ordinal data (using polychoric correlations and an asymptotic covariance matrix), but requires a very large sample (Jöreskog & Sörbom, 1996; Schutz, 1999). Maximum likelihood (ML) estimation is the most frequently used estimation procedure in SEM. Its use assumes normality and independence of the error terms, but it has been found to perform satisfactorily with small samples (Kline, 1998; Tabachnick & Fidell, 1996). The indicators in this study were based on Likert-type scales with a small number of ranked categories (i.e., 4- to 6-point response scales). Such data are, technically, ordinal and potentially problematic in SEM. Kline warns that the
distributional assumptions of normality are more likely to be violated with ordinal data, and that
their intercorrelations may be truncated, thus causing pathway coefficients to be underestimated.
However, the results of Hutchinson and Olmos' (1998) Monte Carlo simulation with ordered
categorical data indicate that ML performs well when ordinal data are symmetric and only
moderately kurtotic. (Schutz [1999] has argued that ML is appropriate for ordinal data when
average skewness and kurtosis is less than 1.0.) Therefore, after an examination of the
distributional properties of the indicator variables, I chose to use ML estimation with a
covariance input matrix.

Confirmatory factor analyses were conducted to estimate the extent to which the set of
indicators were associated with the hypothesized underlying constructs. The direct and indirect
structural relationships between latent variables were then estimated as a second-step, after the
measurement model had been estimated and found satisfactory according to fit criteria described
below.

**Fit of the Model.** Model fit refers to both the overall fit of the model and the theoretical
plausibility and statistical significance of individual parameter estimates. In SEM, there are
several measures of global fit (i.e., fit indices) available to the researcher, and most are available
in LISREL 8.30. Fit indices generally attempt to evaluate the congruence between the
hypothesized model and the observed data, but use different methods which have been
developed "under different theoretical rationales" (Fan et al., 1999, p. 58). The various fit
indices have been categorized as absolute fit indices, relative or incremental fit indices,
 parsimonious fit indices, noncentrality based fit indices, and information indices (Fan et al.;
Park, 1999; Tanaka, 1993).

**Absolute fit indices** are those which compare the observed covariance matrix (which is
taken as an estimate of the population covariance matrix) with the covariance matrix that is implied by the estimated model. If the two matrices are very similar (i.e., with small residuals) the model is said to fit the observed data. Absolute fit indices do not depend on a comparison to any alternative model. The chi-square test, the Goodness of Fit Index (GFI, Jöreskog & Sörbom, 1993), the standardized root mean square residual (SRMR), and the root mean square error of approximation (RMSEA, Steiger & Lind, as cited in Rigdon, 1996) are absolute fit indices. The chi-square statistic was widely used as a sole measure of fit in the early days of SEM, but it is now known to be limited by its sensitivity to sample size (the hypothesized model is likely to be falsely rejected with large samples and falsely accepted with small samples) and requirement of a “dichotomous decision strategy” where the null hypothesis is either accepted or rejected without any quantification of the “degree of fit” (Hu & Bentler, 1995, p. 81).

*Relative or incremental fit indices* such as the Normed Fit Index (NFI; Bentler & Bonett, as cited in Hu & Bentler, 1995) and the Comparative Fit Index (CFI; Bentler, 1990), require three reference points for their computation: the sample covariance matrix, the covariance matrix implied by the hypothesized model, and a baseline model (Hu & Bentler). The null model, or fully restricted model, often serves as the baseline. Incremental indices are also referred to as comparative or relative measures of fit since they assess the improvement in fit provided by the hypothesized model over the baseline model. *Model parsimony fit indices* such as the Adjusted Goodness of Fit Index (AGFI, Jöreskog & Sörbom, 1993), the Parsimony Fit Index (PFI, James et al., 1982), and the Non-Normed Fit Index (NNFI, also known as the Tucker-Lewis Index) take into account the complexity of the model and favour less complex models. The CFI and RMSEA are also categorized as *non-centrality based fit indices*.

*Information indices* include the Akaike Information Criterion (AIC) and the Expected Cross-
Validation Index (ECVI) which can be used when comparing models with varying numbers of latent variables. Other than the chi-square statistic, the SRMR, the RMSEA, and the information indices, most of the other fit indices have values ranging between zero and one, with larger values indicating better fit.

A review of the literature indicates that that the various fit indices differ in their sensitivity to research conditions. However, because the performance of each fit measure may depend on a complex interaction of conditions, there are no simple strategies for selecting the most appropriate SEM fit index. A number of Monte Carlo simulation studies have investigated the performance of the various fit indices; however, their results show some variability according to the particular conditions and combinations of conditions that were applied. For example, sensitivity to sample size has been assessed with samples ranging in size from 100 to 650 (Yadama & Pandey, 1995), 100 to 1000 (Fan et al., 1999), and 150 to 5,000 (Hu & Bentler, 1995). Other factors that have been investigated include estimation method, violations of normality and independence, complexity of the model, and model mis-specification (Fan et al.; Hu & Bentler; LaDu & Tanaka, 1995).

The general consensus in the SEM methodology literature is that fit should be evaluated with several measures drawn from the various categories of indices, taking into consideration the particular conditions of the research (Bollen & Long, 1993; Hu & Bentler, 1999; Fan et al., 1999). I, therefore, chose to use the following fit measures and cutoff criteria as recommended by Bollen and Long (1993) and Hu and Bentler (1999): RMSEA (.06), SRMR (.08), the CFI and NNFI (close to .95), ECVI, and the chi-square statistic. Small values of the chi-square (with a high p value) indicate good fit (i.e., indicates that the two covariance matrices are not statistically different). The RMSEA has a minimum value of 0 which indicates a perfect fit.
Browne and Cudeck (1993) suggested that values of .05 or less indicate a good fit, and that values less than .08 indicate a reasonable fit. Its use is particularly important in this study because of Hutchinson and Olmos' (1998) findings that the RMSEA performs well with ordinal data that is symmetric and only mildly kurtotic. RMSEA, CFI, and NFI have all been found to be less sensitive to sample size than other measures. RMSEA also adjusts for degrees of freedom and thus also serves as a parsimony index. The GFI was also be examined as one of the more traditional absolute fit indices.

Modification of the Model. All modifications are fully described in Chapter 6. Modifications were suggested by the modification indices with chi-square difference tests computed in LISREL, but were justified by theoretical and common sense considerations.
CHAPTER FIVE – CHARACTERISTICS OF THE STUDY PARTICIPANTS

This chapter focuses on a description of the sexual harassment experiences of the study participants. It also includes descriptive findings related to other school-based stressors, physical and psychological health status, and the students’ health-related behaviours.

**Sexual Harassment Experiences**

**The Prevalence of Sexual Harassment**

Consistent with other surveys with this population (AAUW, 1993; Fineran & Bennett, 1999; Trigg & Wittenstrom, 1996), results indicate that the vast majority of students in the sample (92.9%) had experienced at least one form of sexual harassment during the prior two months. There were no statistically significant differences in the prevalence rates by province, \( \chi^2(1, N = 565) = 1.28, p = .26 \), or by grade, \( \chi^2(2, N = 565) = 3.70, p = .16 \), although a higher proportion of females (95%) than males (89%) reported being the target of at least one harassment behaviour during the prior two months, \( \chi^2(1, N = 565) = 6.63, p < .05 \).

**The Labelling of Sexual Harassment Behaviours.** Within this discussion, “experiencing sexual harassment” means that the respondent acknowledged being the target of at least one of the 19 harassment behaviours included in the sexual harassment scale; it does not mean that the student identified that experience as “sexual harassment”. There was one global item at the beginning of the scale that was labelled “Part K – Behaviours of Your Peers” that asked students to report whether or not they had been “sexually harassed” during the prior 2 months. Among those students who reported experiencing at least one of the 19 harassment behaviours, only 14% of the males, and 35% of the females, reported that they had been “sexually harassed”. Thus, students’ perceptions and/or reporting of their peers’ behaviours seriously underestimate the prevalence of sexual harassment according to the behavioural definitions commonly used by
harassment researchers. Among the total sample, only 25% reported that they had been sexually harassed during the prior two months.

*Which Harassment Behaviours are Most Prevalent?* Table 5 presents the prevalence rates for specific harassment behaviours.¹ Findings indicate that a variety of harassment behaviours were commonly experienced by both male and female students. Eleven of the 19 harassment behaviours were experienced by 30% or more of the female students; 8 of the behaviours were experienced by 30% or more of the male students. The six most prevalent behaviours that were common to both male and females students were items 3, 7, 11, 13, 14, and 15 (negative comments about your body suggesting that you are not feminine/masculine enough; put down females/males; sexual gestures or stares; yelled something sexual, whistled, or howled; touched, grabbed or pinched in a sexual way; and stood too close/brushed up against you. Both gender harassment and sexual advances are included among the most prevalent behaviours. No single behaviour was reported by more than half of the male students, whereas approximately two-thirds of the female participants reported receiving sexual calls, whistles or howls; receiving sexual gestures or stares; and hearing derogatory comments about females during the previous two months. There were, however, two gender harassment behaviours that were experienced by a significantly higher proportion of males than females (being called gay and being called a name like wimp, girl etc., suggesting that you are not masculine enough).

**The Frequency and Appraisal of Harassment Experiences**

Data on the frequency of harassment experiences and students’ appraisal of those

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¹ Although the factor analyses described in Chapter 4 resulted in two subscales with 7 and 9 items respectively, descriptions of individual behaviours in this chapter include all 19 items, for information purposes. The three omitted items (SH 4, 9, and 10) are not used in any subscale calculations.
Table 5
Prevalence of Sexual Harassment Experiences During the Last 2 Months – Comparison by Gender

<table>
<thead>
<tr>
<th>Sexual Harassment Item</th>
<th>% Ever Harassed</th>
<th>Chi-Square Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Spread sexual rumors or wrote sexual graffiti about you on bathroom walls or hallways etc.</td>
<td>22.7%</td>
<td>14.3%</td>
</tr>
<tr>
<td>2. Called you lesbian (gay) or something similar.</td>
<td>28.8%</td>
<td>39.6%</td>
</tr>
<tr>
<td>3. Made negative comments about your body suggesting that you don’t look feminine (masculine) enough.</td>
<td>36.1%</td>
<td>43.3%</td>
</tr>
<tr>
<td>4. Made fun or you or called you names for having too much (not having enough) sexual experience.</td>
<td>16.7%</td>
<td>8.8%</td>
</tr>
<tr>
<td>5. Teased you about having PMS or your period (your hormones, e.g., your testosterone level).</td>
<td>44.8%</td>
<td>6.9%</td>
</tr>
<tr>
<td>6. Called you a name like ‘butch’ etc. (girl, wimp, etc.) suggesting that you are not feminine (masculine) enough.</td>
<td>22.0%</td>
<td>36.3%</td>
</tr>
<tr>
<td>7. Put down females (males) in general.</td>
<td>64.9%</td>
<td>42.6%</td>
</tr>
<tr>
<td>8. Gave you an unwelcome or crude compliment about your body or parts of your body.</td>
<td>39.8%</td>
<td>19.4%</td>
</tr>
<tr>
<td>9. Showed you a sexual cartoon or picture or told you a sexual joke that you didn’t want to see or hear.</td>
<td>33.7%</td>
<td>15.7%</td>
</tr>
<tr>
<td>10. Flashed or “moonied” you.</td>
<td>30.8%</td>
<td>27.8%</td>
</tr>
<tr>
<td>11. Made a sexual gesture or stared at your body in a sexual way.</td>
<td>62.6%</td>
<td>40.6%</td>
</tr>
<tr>
<td>12. Followed you around or pestered you for a date after you said you weren’t interested.</td>
<td>30.5%</td>
<td>19.8%</td>
</tr>
<tr>
<td>13. Yelled something sexual or whistled or howled at you when you walked by.</td>
<td>63.4%</td>
<td>31.8%</td>
</tr>
<tr>
<td>14. Touched, grabbed, or pinched you in a sexual way.</td>
<td>45.8%</td>
<td>38.2%</td>
</tr>
<tr>
<td>15. Stood too close or brushed up against you in a sexual way.</td>
<td>40.1%</td>
<td>35.0%</td>
</tr>
<tr>
<td>16. Pulled at your clothing in a sexual way or pulled your clothing down or off.</td>
<td>18.3%</td>
<td>18.9%</td>
</tr>
<tr>
<td>17. Blocked your way or cornered you in a sexual way.</td>
<td>18.0%</td>
<td>10.6%</td>
</tr>
<tr>
<td>18. Kissed or hugged you when you didn’t want them to.</td>
<td>24.9%</td>
<td>19.8%</td>
</tr>
<tr>
<td>19. Forced you to do something sexual other than kissing or hugging.</td>
<td>10.1%</td>
<td>6.5%</td>
</tr>
</tbody>
</table>

Note. a females: n = 344 – 348, b males: n = 215 – 217. *p < .05 **p < .01 ***p < .001.
experiences offer further important information for understanding peer sexual harassment in schools. Table 6, which presents the mean frequency ratings for each sexual harassment behaviour among only those students who experienced that behaviour during the prior two months, shows some different patterns than were found in the statistics above. Most notably, there are far fewer gender differences in mean frequencies. Only three behaviours demonstrate a higher mean frequency among female students (SH items 4, 6, and 7); two behaviours are found to be higher among males (SH 10 and 15). Fourteen of the 19 behaviours show no statistically significant differences among those male and females students who were targeted, which, contrary to expectations, suggests that among those students who are the targets of particular sexual harassment behaviours, male and female students are being harassed at the same frequency. Although the mean values in Table 6 suggest that each behaviour was experienced on a relatively infrequent basis, it is important to note that the majority of students had experienced multiple forms of harassment during the prior 2 months. For example, five or more forms of harassment were experienced by 64% of the total sample of female students and 45% of the male students. One in every 4 female students had experienced 10 or more forms of harassment during the prior 2 months.

Data on appraisal, however, support the notion that females are more negatively affected by harassment than are males (see Table 7). Fifteen of the harassment behaviours were appraised as significantly more upsetting to females than males, and the differences in appraisal levels are dramatic. For example, the mean appraisal scores for put down females/males in general were 1.22 (SD = 1.21) and 0.42 (SD = 0.81) for females and males, respectively; and the mean scores for being touched, grabbed, or pinched ... in a sexual way were 1.16 (SD = 1.16) and 0.16 (SD = 0.60). Thus, even though the sexual harassment scale asks about behaviours that
<table>
<thead>
<tr>
<th>Sexual Harassment Items</th>
<th>Female (n = 348)</th>
<th></th>
<th></th>
<th>Male (n = 217)</th>
<th></th>
<th></th>
<th></th>
<th>t-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Spread sexual rumors or wrote sexual graffiti ...</td>
<td>78 1.65 (1.13)</td>
<td>1.40 - 1.91</td>
<td></td>
<td>31 1.35 (0.75)</td>
<td>1.08 - 1.63</td>
<td>1.61</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Called you lesbian (gay) or something similar.</td>
<td>100 2.04 (1.37)</td>
<td>1.77 - 2.31</td>
<td></td>
<td>86 2.05 (1.42)</td>
<td>1.74 - 2.35</td>
<td>0.03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Negative comments about your body ...</td>
<td>125 1.96 (1.35)</td>
<td>1.72 - 2.20</td>
<td></td>
<td>93 1.74 (1.13)</td>
<td>1.51 - 1.97</td>
<td>1.26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Made fun of you regarding your sexual experience.</td>
<td>58 1.86 (1.19)</td>
<td>1.55 - 2.18</td>
<td></td>
<td>19 1.16 (0.50)</td>
<td>0.92 - 1.40</td>
<td>3.63**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Teased about PMS/your period (testosterone level) ...</td>
<td>154 1.40 (0.80)</td>
<td>1.27 - 1.53</td>
<td></td>
<td>15 1.13 (0.52)</td>
<td>0.85 - 1.42</td>
<td>1.82</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Called a name like ‘butch’ etc. (wimp etc.) ...</td>
<td>76 1.99 (1.38)</td>
<td>1.67 - 2.30</td>
<td></td>
<td>78 1.53 (0.83)</td>
<td>1.34 - 1.71</td>
<td>2.50*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Put down females (males) in general.</td>
<td>226 2.01 (1.24)</td>
<td>1.85 - 2.17</td>
<td></td>
<td>92 1.63 (1.06)</td>
<td>1.41 - 1.85</td>
<td>2.57*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Unwelcome or crude compliment about your body ...</td>
<td>138 1.82 (1.11)</td>
<td>1.63 - 2.01</td>
<td></td>
<td>42 1.55 (0.99)</td>
<td>1.24 - 1.86</td>
<td>1.42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Sexual cartoon ... or sexual joke ...</td>
<td>117 1.67 (1.18)</td>
<td>1.45 - 1.88</td>
<td></td>
<td>34 1.71 (1.06)</td>
<td>1.34 - 2.08</td>
<td>0.17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Flash or “mooned” you.</td>
<td>107 1.36 (0.66)</td>
<td>1.24 - 1.49</td>
<td></td>
<td>60 1.77 (1.01)</td>
<td>1.50 - 2.03</td>
<td>-2.76**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Sexual gesture or stare ...</td>
<td>218 1.94 (1.17)</td>
<td>1.78 - 2.10</td>
<td></td>
<td>88 2.19 (1.40)</td>
<td>1.90 - 2.49</td>
<td>-1.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Followed you around or pestered you for a date ...</td>
<td>106 1.70 (1.00)</td>
<td>1.51 - 1.89</td>
<td></td>
<td>43 2.00 (1.43)</td>
<td>1.56 - 2.44</td>
<td>-1.27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Yelled something sexual, whistled or howled ...</td>
<td>220 1.93 (1.12)</td>
<td>1.78 - 2.01</td>
<td></td>
<td>69 2.01 (1.16)</td>
<td>1.74 - 2.29</td>
<td>-0.56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Touched, grabbed, or pinched you in a sexual way.</td>
<td>159 1.97 (1.17)</td>
<td>1.79 - 2.15</td>
<td></td>
<td>83 2.12 (1.21)</td>
<td>1.86 - 2.39</td>
<td>-0.95</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Stood too close or brushed against you ...</td>
<td>139 1.72 (1.04)</td>
<td>1.54 - 1.89</td>
<td></td>
<td>76 2.17 (1.18)</td>
<td>1.90 - 2.44</td>
<td>-2.89**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Pulled at your clothing in a sexual way ...</td>
<td>63 1.76 (1.04)</td>
<td>1.50 - 2.02</td>
<td></td>
<td>41 1.90 (1.11)</td>
<td>1.55 - 2.25</td>
<td>-0.65</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. Blocked your way or cornered you in a sexual way.</td>
<td>62 1.44 (0.78)</td>
<td>1.24 - 1.63</td>
<td></td>
<td>23 1.70 (1.18)</td>
<td>1.18 - 2.21</td>
<td>-1.18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. Kissed or hugged you when you didn’t want them to.</td>
<td>86 1.56 (0.98)</td>
<td>1.35 - 1.77</td>
<td></td>
<td>43 1.74 (1.18)</td>
<td>1.38 - 2.11</td>
<td>-0.95</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. Forced you to do something sexual ...</td>
<td>35 1.43 (0.74)</td>
<td>1.17 - 1.68</td>
<td></td>
<td>14 1.43 (0.51)</td>
<td>1.13 - 1.73</td>
<td>0.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Response Scale: 0 = Never, 1 = 1 or 2 times, 2 = 3 to 5 times, 3 = Once a week or 5 to 10 times, 4 = Several times a week, 5 = Daily or almost daily. *p < .05 **p < .01 ***p < .001.
<table>
<thead>
<tr>
<th>Sexual Harassment Items</th>
<th>Female (n = 348)</th>
<th>Male (n = 217)</th>
<th>t-test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>1. Spread sexual rumors or wrote sexual graffiti ...</td>
<td>78</td>
<td>2.21</td>
<td>(1.44)</td>
</tr>
<tr>
<td>2. Called you lesbian (gay) or something similar.</td>
<td>100</td>
<td>1.32</td>
<td>(1.50)</td>
</tr>
<tr>
<td>3. Negative comments about your body ...</td>
<td>125</td>
<td>1.94</td>
<td>(1.41)</td>
</tr>
<tr>
<td>4. Made fun of you regarding your sexual experience.</td>
<td>58</td>
<td>1.81</td>
<td>(1.44)</td>
</tr>
<tr>
<td>5. Teased about PMS/your period (testosterone level) ...</td>
<td>150</td>
<td>0.69</td>
<td>(0.97)</td>
</tr>
<tr>
<td>6. Called a name like ‘butch’ etc. (wimp etc.) ...</td>
<td>75</td>
<td>1.36</td>
<td>(1.40)</td>
</tr>
<tr>
<td>7. Put down females (males) in general.</td>
<td>221</td>
<td>1.22</td>
<td>(1.21)</td>
</tr>
<tr>
<td>8. Unwelcome or crude compliment about your body ...</td>
<td>138</td>
<td>1.91</td>
<td>(1.41)</td>
</tr>
<tr>
<td>9. Sexual cartoon ... or sexual joke ...</td>
<td>117</td>
<td>0.75</td>
<td>(1.02)</td>
</tr>
<tr>
<td>10. Flashed or “mooned” you.</td>
<td>108</td>
<td>0.31</td>
<td>(0.66)</td>
</tr>
<tr>
<td>11. Sexual gesture or stare ...</td>
<td>217</td>
<td>0.95</td>
<td>(1.16)</td>
</tr>
<tr>
<td>12. Followed you around or pestered you for a date ...</td>
<td>106</td>
<td>1.34</td>
<td>(1.19)</td>
</tr>
<tr>
<td>13. Yelled something sexual, whistled or howled ...</td>
<td>219</td>
<td>0.73</td>
<td>(1.01)</td>
</tr>
<tr>
<td>14. Touched, grabbed, or pinched you in a sexual way.</td>
<td>160</td>
<td>1.16</td>
<td>(1.16)</td>
</tr>
<tr>
<td>15. Stood too close or brushed against you ...</td>
<td>139</td>
<td>0.91</td>
<td>(1.14)</td>
</tr>
<tr>
<td>16. Pulled at your clothing in a sexual way ...</td>
<td>63</td>
<td>1.62</td>
<td>(1.52)</td>
</tr>
<tr>
<td>17. Blocked your way or cornered you in a sexual way.</td>
<td>62</td>
<td>1.00</td>
<td>(1.07)</td>
</tr>
<tr>
<td>18. Kissed or hugged you when you didn’t want them to.</td>
<td>85</td>
<td>1.47</td>
<td>(1.24)</td>
</tr>
<tr>
<td>19. Forced you to do something sexual ...</td>
<td>35</td>
<td>2.94</td>
<td>(1.47)</td>
</tr>
</tbody>
</table>

Note. Response Scale: 0 = Not upsetting, 1 = Slightly upsetting, 2 = Somewhat upsetting, 3 = Moderately upsetting, 4 = Very upsetting.  
*p < .05  **p < .01  ***p < .001.
occurred when the respondent did not want them to, many more of the males who acknowledged being targeted reported that it was not upsetting to them, or was only slightly upsetting. The two behaviours reported as the most upsetting to males was when their peers spread sexual rumours or wrote sexual graffiti ($M = 1.13$, $SD = 1.41$) and being followed ... pestered for a date ($M = 0.95$, $SD = 1.28$). Females were also upset by sexual rumours; this behaviour received the second highest appraisal score ($M = 2.22$, $SD = 1.44$). As expected, being forced to do something sexual other than kissing or hugging was reported as being the most upsetting experience for females ($M = 2.94$, $SD = 1.47$).

Total frequency scores were computed for the two subscales (Gender Harassment and Sexual Advances/Imposition) and the total scale, as indicated by the factor analyses described in Chapter 4; results are presented in Table 8. A two-way ANOVA was used to examine the differences by gender and grade. Unsurprisingly, the ANOVA summary table (Table 9) indicates that, as a group, female students were the targets of both forms of sexual harassment significantly more often than male students. A significant group difference for grade was found for the Gender Harassment sub-scale and was reflected in the total Sexual Harassment scores. Dunnett T3 post hoc comparisons (utilized because the test of homogeneity of variances was not supported, with $p < .01$) indicated that Grade 9 students experienced statistically significant higher levels of gender harassment than students in Grades 10 ($p < .01$). The mean difference between scores for Grade 9 and Grade 11 students neared significance at $p = .056$. The interaction term (gender-by-grade) was not found to be significant for any of the measures.
Table 8
Mean Scores on the Sexual Harassment Scale and Sub-Scales, by Gender

<table>
<thead>
<tr>
<th>Scale/Subscale</th>
<th>Female n = 348</th>
<th>Male n = 217</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>M</td>
</tr>
<tr>
<td>Gender Harassment Subscale</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade 9</td>
<td>7</td>
<td>5.84</td>
</tr>
<tr>
<td>Grade 10</td>
<td></td>
<td>3.85</td>
</tr>
<tr>
<td>Grade 11</td>
<td></td>
<td>4.27</td>
</tr>
<tr>
<td>Sexual Advances/Imposition Subscale</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade 9</td>
<td>9</td>
<td>5.52</td>
</tr>
<tr>
<td>Grade 10</td>
<td></td>
<td>5.93</td>
</tr>
<tr>
<td>Grade 11</td>
<td></td>
<td>5.27</td>
</tr>
<tr>
<td>Total Sexual Harassment Scale</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade 9</td>
<td>16</td>
<td>11.37</td>
</tr>
<tr>
<td>Grade 10</td>
<td></td>
<td>9.78</td>
</tr>
<tr>
<td>Grade 11</td>
<td></td>
<td>9.54</td>
</tr>
</tbody>
</table>

Note. Response scale = 0 – 5. Total range of scores: Gender Harassment = 0 – 35; Sexual Advances/Imposition = 0 – 45; Total Sexual Harassment Scale = 0 – 80.

Table 9
Analysis of Variance Results for Sexual Harassment Scale and Sub-Scales

<table>
<thead>
<tr>
<th>Scale/Subscale</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender Harassment Subscale</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>208.70</td>
<td>1</td>
<td>208.70</td>
<td>10.83**</td>
</tr>
<tr>
<td>Grade</td>
<td>253.54</td>
<td>2</td>
<td>126.77</td>
<td>6.58**</td>
</tr>
<tr>
<td>Sex x Grade</td>
<td>23.02</td>
<td>2</td>
<td>11.51</td>
<td>0.60</td>
</tr>
<tr>
<td>Error</td>
<td>10638.45</td>
<td>552</td>
<td>19.27</td>
<td></td>
</tr>
<tr>
<td>Sexual Advances/Imposition Subscale</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>156.73</td>
<td>1</td>
<td>156.73</td>
<td>4.03*</td>
</tr>
<tr>
<td>Grade</td>
<td>43.96</td>
<td>2</td>
<td>21.98</td>
<td>0.56</td>
</tr>
<tr>
<td>Sex x Grade</td>
<td>95.98</td>
<td>2</td>
<td>47.99</td>
<td>1.23</td>
</tr>
<tr>
<td>Error</td>
<td>21536.63</td>
<td>554</td>
<td>38.88</td>
<td></td>
</tr>
<tr>
<td>Total Sexual Harassment Scale</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>731.85</td>
<td>1</td>
<td>731.85</td>
<td>9.28**</td>
</tr>
<tr>
<td>Grade</td>
<td>501.87</td>
<td>2</td>
<td>250.94</td>
<td>3.18*</td>
</tr>
<tr>
<td>Sex x Grade</td>
<td>47.62</td>
<td>2</td>
<td>23.81</td>
<td>0.30</td>
</tr>
<tr>
<td>Error</td>
<td>43517.93</td>
<td>552</td>
<td>78.84</td>
<td></td>
</tr>
</tbody>
</table>

*p < .05  **p < .01  ***p < .001.
Gender Analysis of the Victim-Perpetrator Dyad

For each sexual harassment behaviour, respondents were asked to identify the gender of the perpetrator(s) as *mostly girls, mostly boys, or both girls and boys*. Unsurprisingly, cross-gender harassment accounts for almost all of the behaviours in the sexual advances/imposition subscale. The only substantial variation to this pattern was that 10% of the boys who reported that their clothing had been pulled in a sexual way or pulled down or off (SH item 16), reported that this behaviour had been perpetrated mostly by other boys. This finding is likely due to the "double-barrelled" nature of the item which asks about behaviours that are intended to reflect a sexual motivation in conjunction with behaviours that may be more representative of same-sex gender harassment. (The 1993 AAUW survey listed these behaviours separately, and this study's findings support that original item construction.)

Table 10 reports the gender of the perpetrator for behaviours in the gender harassment subscale. Other than the general "gender put-downs" (SH7) which, as expected, are primarily cross-gender behaviours, the pattern varies between male and female targets of harassment. For the majority of items, approximately half of the females reported that the behaviours were perpetrated by males, with another third reporting that the behaviours were committed by both males and females. In contrast, the large majority of male victims of gender harassment reported same-gender harassment. Thus it appears that males are predominantly responsible for the gender harassment that occurs to both male and female students, whereas both male and female students are involved in harassment that takes the form of sexual advances or imposition.
<table>
<thead>
<tr>
<th>Gender Harassment Item</th>
<th>% of Female Targets Reporting Gender of Perpetrator as…</th>
<th>% of Male Targets Reporting Gender of Perpetrator as…</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mostly Boys</td>
<td>Mostly Girls</td>
</tr>
<tr>
<td>1. Spread sexual rumors or wrote sexual graffiti ...</td>
<td>35.5</td>
<td>28.9</td>
</tr>
<tr>
<td>2. Called you lesbian (gay) or something similar.</td>
<td>48.0</td>
<td>19.0</td>
</tr>
<tr>
<td>3. Negative comments about your body ...</td>
<td>61.5</td>
<td>8.2</td>
</tr>
<tr>
<td>4. Made fun of you regarding your sexual experience.</td>
<td>32.1</td>
<td>26.8</td>
</tr>
<tr>
<td>5. Teased about PMS/your period (testosterone level)</td>
<td>47.9</td>
<td>24.7</td>
</tr>
<tr>
<td>6. Called a name like ‘butch’ etc. (wimp etc.) ...</td>
<td>48.6</td>
<td>19.4</td>
</tr>
<tr>
<td>7. Put down females (males) in general.</td>
<td>92.8</td>
<td>2.3</td>
</tr>
<tr>
<td>8. Unwelcome or crude compliment about your body ...</td>
<td>67.7</td>
<td>11.3</td>
</tr>
<tr>
<td>9. Sexual cartoon ... or sexual joke ...</td>
<td>72.0</td>
<td>3.7</td>
</tr>
<tr>
<td>10. Flashed or “mooned” you.</td>
<td>89.4</td>
<td>3.8</td>
</tr>
</tbody>
</table>
Coping Responses to Sexual Harassment

Students were asked to report on the frequency of their use of 11 possible coping responses to the sexually harassing behaviours of their peers. Their responses, dichotomized into ever used or never used are reported in Table 11. Denial was the most prevalent response among both males (57%) and females (64%). The other three responses that were used by more than half of the female respondents were seeking social support, detachment, and endurance. Avoidance and confrontation, the two behavioural responses that were of particular interest in this study, were used by 49% and 46% of the females, respectively. Relabelling was the second most commonly used response among males, and it was the only coping strategy reported by more males than females, although the difference did not reach statistical significance (p = .17). Informal and formal complaints to the school were the least commonly used responses to harassment, with no statistically significant differences by gender.

When mean frequencies were examined, social support was found to be the most frequently used response among females (M = 1.52, SD = 1.50), and at a significantly higher level than among males (M = 0.51, SD = 1.01), t = 8.43, p < .001. The response format for this scale was: 0 (never used), 1 (sometimes), 2 (half the time), 3 (frequently) and 4 (all or almost all the time). The 95% confidence interval for use of social support among females was 1.35 to 1.70; thus, even social support was used, on average, less than half the time. However, both male and female students reported using multiple forms of coping, with females reporting the greater variety of responses. Half of the female respondents (51%) reported used 5 or more coping strategies in response to the harassment behaviours of their peers; one-third of the males (32%) had used 5 or more responses.
Table 11
Gender Comparison of Coping Strategies Used in Response to Sexual Harassment Behaviours

<table>
<thead>
<tr>
<th>Coping Responses to Harassment Behavioursa</th>
<th>Ever Used the Response</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Femaleb</td>
<td>Malec</td>
</tr>
<tr>
<td><strong>Internal or Cognitive Responses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. I told myself it wasn’t really important (detachment).</td>
<td>57.8</td>
<td>42.5</td>
</tr>
<tr>
<td>2. I told myself to forget the whole thing (denial).</td>
<td>64.0</td>
<td>56.9</td>
</tr>
<tr>
<td>3. I just kept it to myself and didn’t say anything (endurance).</td>
<td>54.8</td>
<td>44.4</td>
</tr>
<tr>
<td>4. I figured he or she must really like me (relabelling).</td>
<td>42.1</td>
<td>49.0</td>
</tr>
<tr>
<td>5. I figured it wouldn’t have happened if I had behaved or dressed differently (illusory control).</td>
<td>25.1</td>
<td>22.0</td>
</tr>
<tr>
<td><strong>External or Behavioural Responses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. I joked around with him/her ... and hoped he/she would leave me alone (appeasement).</td>
<td>42.4</td>
<td>36.7</td>
</tr>
<tr>
<td>7. I stayed away from him/her as much as possible (avoidance).</td>
<td>49.1</td>
<td>38.7</td>
</tr>
<tr>
<td>8. I talked to my friends for understanding and support (social support).</td>
<td>62.3</td>
<td>27.3</td>
</tr>
<tr>
<td>9. I let him or her know that I didn’t like what he/she was doing (confrontation).</td>
<td>45.7</td>
<td>33.6</td>
</tr>
<tr>
<td>10. I told a teacher, counsellor, or other school staff (informal complaint - institutional relief).</td>
<td>11.3</td>
<td>6.7</td>
</tr>
<tr>
<td>11. I made a formal complaint to the school (formal complaint - institutional relief).</td>
<td>7.4</td>
<td>5.4</td>
</tr>
</tbody>
</table>

Note. aAmong those who were ever harassed. bFemales: n = 279 – 288. cMales: n = 153 – 157.
*p < .05 **p < .01 ***p < .001.

Students’ Perceptions of School’s Tolerance for Sexual Harassment

The final scale concerning sexual harassment experiences asked students their perceptions of their school’s efforts to (a) prevent harassment, (b) stop harassment when it occurred, and (c) respond to complaints about harassment. Mean scores were neutral with regards to the school’s efforts to prevent and stop harassment behaviours (M = 4.2, SD = 1.6 and
\( M = 4.1, SD = 1.9, \) respectively, on a scale of 1 to 7), but slightly favourable with respect to their school’s response to a student’s complaint about such behaviours \( (M = 5.0, SD = 1.8) \). A two-way ANOVA showed no gender or grade differences for any of the variables.

**Other Characteristics of the Sample**

This section reports on the other characteristics of the students, including school-based stressors (other than harassment), physical and psychological health status, and health-related behaviours. A two-way ANOVA was used to examine the differences by gender and grade. Female students reported worse health than male students; they reported statistically significant higher levels of physical health complaints and depression and lower levels of self-worth. Female students also reported higher levels of school-based stressors, but no significant difference was found for social desirability scores. Gender comparisons, only, are reported in Table 12.

**Table 12**

**Other Characteristics of the Sample with Comparison by Gender**

<table>
<thead>
<tr>
<th>Scale</th>
<th>n items</th>
<th>Range</th>
<th>Female</th>
<th>Male</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>( M )</td>
<td>( SD )</td>
<td></td>
</tr>
<tr>
<td>School Stressors</td>
<td>14</td>
<td>0 - 70</td>
<td>21.3 (10.7)</td>
<td>19.1 (11.2)</td>
<td>6.17*</td>
</tr>
<tr>
<td>Physical Health Effects</td>
<td>8</td>
<td>0 - 32</td>
<td>11.9 (5.7)</td>
<td>8.1 (5.2)</td>
<td>59.01***</td>
</tr>
<tr>
<td>Depression</td>
<td>20</td>
<td>0 - 60</td>
<td>22.0 (11.6)</td>
<td>14.9 (8.6)</td>
<td>55.42***</td>
</tr>
<tr>
<td>Self-Worth</td>
<td>5</td>
<td>5 - 20</td>
<td>13.9 (3.7)</td>
<td>15.5 (2.8)</td>
<td>26.03***</td>
</tr>
<tr>
<td>Social Desirability Scale</td>
<td>13</td>
<td>0 - 13</td>
<td>6.3 (2.8)</td>
<td>6.2 (2.8)</td>
<td>0.37</td>
</tr>
</tbody>
</table>

\( *p < .05 \quad **p < .01 \quad ***p < .001. \)

\(^2\) Although the intent of the CES-D was not to produce a diagnosis of clinical depression, it was noted that 18% of male respondents, and 40% of female respondents scored above the recommended cut-off points of 22 and 24 for males and females, respectively (Gore et al., 1993).
A significant group difference for grade was found only for School Stressors, with Grade 9 students reporting significantly lower levels of stress than Grade 10 students, according to Dunnett T3 post hoc comparisons, $p < .05$. The interaction term (gender-by-grade) was not found to be significant for any of the measures. Zero-order correlations for the total scores on all measures (including frequency of sexual harassment) are presented in Table 13 (the correlations for female students are reported on the lower half of the table).

Table 13
Correlations among all Measures

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Gender Harassment</td>
<td></td>
<td>.22**</td>
<td>.22***</td>
<td>.22**</td>
<td>.26***</td>
<td>-.14*</td>
<td>-.16*</td>
</tr>
<tr>
<td>2. Sexual Advances/Imposition</td>
<td>.45***</td>
<td></td>
<td>.25***</td>
<td>.22**</td>
<td>.00</td>
<td>.07</td>
<td>-.05</td>
</tr>
<tr>
<td>3. School Stressors</td>
<td>.41***</td>
<td>.41***</td>
<td></td>
<td>.51***</td>
<td>.38***</td>
<td>-.29***</td>
<td>-.36***</td>
</tr>
<tr>
<td>4. Physical Health Effects</td>
<td>.37***</td>
<td>.30***</td>
<td>.48***</td>
<td></td>
<td>.49***</td>
<td>-.41***</td>
<td>-.28***</td>
</tr>
<tr>
<td>5. Depression</td>
<td>.45***</td>
<td>.30**</td>
<td>.52***</td>
<td>.58***</td>
<td></td>
<td>-.64***</td>
<td>-.24***</td>
</tr>
<tr>
<td>6. Self-Worth</td>
<td>-.27***</td>
<td>-.17**</td>
<td>-.33***</td>
<td>-.43***</td>
<td>-.65***</td>
<td></td>
<td>.29***</td>
</tr>
<tr>
<td>7. Social Desirability Scale</td>
<td>-.26***</td>
<td>-.21***</td>
<td>-.33***</td>
<td>-.27***</td>
<td>-.34***</td>
<td>.40***</td>
<td></td>
</tr>
</tbody>
</table>

Note: Correlations for female students are reported on the lower half of the table. *$p < .05$ **$p < .01$ ***$p < .001$.

Among female students, a moderately low correlation ($r = .41$) was found between the two measures of sexual harassment and other school-based stressors. The frequency of sexual harassment experiences was found to be positively correlated with physical health complaints and depression, and inversely correlated with self-worth. Similar, but slightly stronger, relationships were found between other school-based stressors and the three health outcome measures. A similar pattern held among males for school stressors, the gender harassment
subscale, and health outcomes, but the sexual advances/imposition subscale was found to be related only to physical health effects. Thus, all of the significant relationships between the two stressors and health outcomes were in the expected direction.

Social desirability scores showed significant but low correlations with all of the measures for female respondents, in the expected direction (i.e., there was a low negative correlation with the three stressors and the two measures of poor health, but a positive correlation with self-worth scores). There were similar findings among male students, except that no association was found with sexual advances/imposition subscale. The highest correlation \( r = .40 \) indicates that 16\% of the variance in reported self-worth by females may be explained by a socially desirable response pattern; only 7.0\% of the variance in gender harassment and 4.4\% of the variance in sexual advances/imposition responses were associated with social desirability. (An examination of scatterplots between social desirability scores and the other five measures did not indicated any problematic cases to be removed.) Thus, although there may be some bias in reporting, with negative events being underreported, the bias was judged to be at an acceptable level.

**Students' Health-Related Behaviours**

The survey asked about health-risk behaviours and health-promoting behaviours. Students were asked if they had ever smoked, drank alcohol, or used marijuana (other than a few puffs or sips etc. to see what it is like), and then were questioned about the frequency and intensity of such behaviours. They were also asked about weight management practices including bingeing, purging, and the use of diet pills or steroids. These three items were collapsed into one new variable labelled *unhealthy eating/weight management practices*, utilizing the same response scale. Two new dichotomous variables were constructed for each of
the four health-risk behaviours to reflect engagement in the risk behaviour during the last 2 months (yes/no) and frequent engagement in the behaviour (yes/no); these results are reported in Table 14.

Drinking was the most frequent health-risk behaviour, with approximately two-thirds of male and female students reporting that they had drunk alcohol during the prior two months. There were no gender differences in the percentage of students who reported drinking or using marijuana during the last two months, although a higher proportion of males than females reported frequent use of each substance (i.e., on a weekly basis or more often). In contrast, a higher percentage of females had smoked cigarettes at some time in the past (other than trying a few puffs) and more females reported smoking frequently (at least several times a week). More females than males also reported engaging in unhealthy eating/weight management practices during the prior 2 months. Binge-eating was reported by 43% of the girls and 30% of the boys; purging was reported by 14% of the girls and 1% of the boys; and the use of diet pills or steroids was reported by 6% of the girls and 2% of the boys. As expected, grade 11 students reported the highest prevalence of substance use during the prior 2 months, although the differences were statistically significant only for marijuana use, $\chi^2(2, N = 216) = 11.77, p < .01$ among male students, and $\chi^2(2, N = 338) = 10.27, p < .01$ among female students.

Students were asked about such their sleeping, eating, and exercise habits, and about safe sexual practices. The mean of the three items related to food habits was used to create a new variable labelled health-promoting nutrition (HP Nutrition) which retained the same response scale. Four new dichotomous variables (yes/no) were then constructed to reflect frequent engagement in each health-promoting behaviour: adequate sleep (5 or more times per week); healthful eating (more than half the time); frequent aerobic exercise (at least 3 – 4 times
Table 14
Health-Related Behaviours of Students with a Comparison by Gender

<table>
<thead>
<tr>
<th>Scale</th>
<th>Female (n = 348)</th>
<th>Male (n = 217)</th>
<th>Chi-Square Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Health-Risk Behaviours</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cigarette Smoking</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ever smoked</td>
<td>54%</td>
<td>44%</td>
<td>5.94*</td>
</tr>
<tr>
<td>Smoked during the last 2 months</td>
<td>42%</td>
<td>35%</td>
<td>3.17</td>
</tr>
<tr>
<td>Frequent smoking (several times a week or more)</td>
<td>26%</td>
<td>18%</td>
<td>4.06*</td>
</tr>
<tr>
<td>Use of Alcohol</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ever drank alcohol</td>
<td>77%</td>
<td>76%</td>
<td>0.17</td>
</tr>
<tr>
<td>Drank during the last 2 months</td>
<td>63%</td>
<td>60%</td>
<td>0.28</td>
</tr>
<tr>
<td>Frequent drinking (on a weekly basis or more)</td>
<td>13%</td>
<td>18%</td>
<td>3.77**</td>
</tr>
<tr>
<td>Use of Marijuana</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ever used marijuana</td>
<td>44%</td>
<td>49%</td>
<td>1.06</td>
</tr>
<tr>
<td>Used marijuana during the last 2 months</td>
<td>29%</td>
<td>35%</td>
<td>2.01</td>
</tr>
<tr>
<td>Frequent use of marijuana (on a weekly basis or more)</td>
<td>9%</td>
<td>17%</td>
<td>9.18**</td>
</tr>
<tr>
<td>Unhealthy eating/weight management during last 2 months</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ever binged, purged, used diet pills/steroids in last 2 months</td>
<td>49%</td>
<td>31%</td>
<td>18.2***</td>
</tr>
<tr>
<td>Frequently (on a weekly basis or more)</td>
<td>10%</td>
<td>8%</td>
<td>0.52</td>
</tr>
<tr>
<td><strong>Health-Promoting Behaviours</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adequate sleep (5 or more times per week)</td>
<td>31%</td>
<td>36%</td>
<td>1.05</td>
</tr>
<tr>
<td>Healthful eating (more than half the time)</td>
<td>17%</td>
<td>22%</td>
<td>2.06</td>
</tr>
<tr>
<td>Frequent aerobic exercise (at least 3 – 4 times per week)</td>
<td>59%</td>
<td>78%</td>
<td>22.1***</td>
</tr>
<tr>
<td>Sexual abstinence or consistent use of condoms</td>
<td>89%</td>
<td>92%</td>
<td>1.50</td>
</tr>
</tbody>
</table>

*p < .05  **p < .01  ***p < .001.

per week); and sexual abstinence or consistent use of condoms. Male students were more likely than female students to engage in frequent aerobic exercise, but no other statistically significant gender differences were found. An examination of patterns by grade found that grade 11 students were the least likely to engage in frequent exercise, \( \chi^2(2, N = 217) = 9.47, p < .01 \) among male students, and \( \chi^2(2, N = 348) = 19.51, p < .001 \) among female students. Female
grade 11 students were also less likely than their peers in grades 9 or 10 to either be sexually abstinent or else use condoms on a consistent basis, $\chi^2(2, N = 346) = 17.36, p < .001$. These were the only grade differences to attain statistical significance although, in general, grade 11 students reported less frequent health-promoting behaviours than the younger students.
CHAPTER SIX – MODELLING PROCESS AND FINDINGS

The primary purpose of this study was to test a theoretical model of causal relationships between school-based peer sexual harassment (and other school-related microstressors) and the psychological, physical, and behavioural health outcomes among adolescent females. Consistent with stress and coping theory (Lazarus & Folkman, 1984), I had hypothesized that the health and health-related behaviours of adolescents are indirectly affected by the frequency with which they experience sexual harassment and other school-related stressors, mediated by their appraisal of the event and their behavioural efforts to manage the harassment (see Figure 1 in Chapter 3). No direct paths or relationships were postulated between the two types of stressors and the various health outcomes. The model also hypothesizes that physical health and health-related behaviours are further influenced by the person's psychological responses to stress.

Structural equation modelling was conducted according to the two-step method (Anderson & Gerbing, 1988; James et al., 1982) wherein the fit of the structural model was assessed only after assessing and confirming the relationship of the observed variables to the latent variables in the measurement model. Data analyses were conducted using data from the female sub-sample (n = 348), with the computer programs SPSS 8.0, PRELIS 2 (Jöreskog & Sörbom, 1999), and LISREL 8.30 (Jöreskog & Sörbom, 1999). SPSS was used to screen the data and calculate data transformations; PRELIS was used to produce the covariance matrix that was subsequently analyzed by LISREL using the Maximum Likelihood estimation method to test the various models. The discussion begins with a description of the process that I followed to establish the measurement model.
The Measurement Model

Selecting Indicators of the Latent Variables

It is possible to use either total scale/sub-scale scores or individual items from each scale as indicator variables, although the total number of indicators per latent variable is an important consideration. Using multiple indicators to assess each latent variable permits calculation of an error term which may be due to either reliability or validity problems (Schumacker & Lomax, 1996, p. 79). When scale totals are used as a single indicator, the alpha statistic from scale reliability analysis can be used to set the path coefficient and error term. However, the reliability analysis for each scale does not consider the relationship of the specific indicators in one scale to those in another (e.g., the relationship between items measuring sexual harassment and those measuring physical health effects), as is done in SEM. Using a minimum of two or three indicators for each latent variable, with a sample size of 200 or more, also facilitates identification and convergence, and reduces the likelihood of obtaining an improper solution (Kelloway, 1998, p. 63). Therefore, because half of the scales relevant to the model were conceptualized as single factor scales (which would have resulted in single item indicators if scale totals were used) and because the remaining scales tended to not factor cleanly in exploratory factor analysis (as discussed in Chapter 4), I aimed to select 3 or 4 of the “best” indicators to represent each latent variable. (Although exploratory factor analysis using principal components analysis with oblique rotation suggested a two-factor solution, because the emphasis of this study was on the relationship between harassment experiences and health outcomes, I did not pursue a confirmatory factor analysis of the sexual harassment instrument.) Finally, using all the items in each scale, even if only for those that yielded a single factor, was
not considered a viable option as sample size would have been too small to support such a large number of indicators.

The process that I followed to determine the few best indicators was based on an examination of their conceptual and statistical properties. First, I examined the items in each scale to identify a small set of items that seemed to most clearly represent each construct as I had defined it for the purpose of this study, with the least redundancy between items. I then checked the descriptive statistics for those items selected to identify possible problems with their distributional properties (i.e., normality). For example, for Sexual Harassment, I first sought to identify items that most closely reflect those behaviours that are typically viewed as sexual harassment, with examples from the domains of verbal, visual, and physical harassment behaviours, including at least one item that is representative of gender harassment. An examination of their descriptive statistics indicated that these items were also the ones that, in general, showed the most frequent endorsement, greatest variance, and least non-normality (with skewness and kurtosis values ≤ 1.0). The one difficulty that I encountered pertained to selecting an indicator of gender harassment, because the items that I considered to be the most conceptually representative of the construct (SH items 2, 3, & 6) showed strong non-normality, with skewness and kurtosis values ranging between 2.1 and 8.6. In the end, albeit with some reservation, I chose to use sexual harassment item 7 (put down females/males in general) as an indicator of gender harassment. Although it is certainly a gender-based denouncement, this behaviour may function less as a stressor because of its less personal or less individualized nature. Table 15 presents the variables that were selected to be tested in the measurement model. Of the 10 latent variables, 6 had 4 indicators each, 2 had 3 indicators each, and 2 had 2 indicators each. Table 16 summarizes the scaling of the indicator variables. Some of the
Table 15
Factors and Indicator Variables for Original Proposed Model

<table>
<thead>
<tr>
<th>FACTORS</th>
<th>Code</th>
<th>Questionnaire Item</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Exogenous Latent Variables</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Sexual harassment – frequency of experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SH7-Freq</td>
<td></td>
<td>Put down females in general</td>
</tr>
<tr>
<td>SH11-Freq</td>
<td></td>
<td>Made a sexual gesture or stared at your body in a sexual way</td>
</tr>
<tr>
<td>SH13-Freq</td>
<td></td>
<td>Yelled something sexual or whistled or howled at you when you walked by</td>
</tr>
<tr>
<td>SH14-Freq</td>
<td></td>
<td>Touched, grabbed, or pinched you in a sexual way</td>
</tr>
<tr>
<td>2. School stressors – frequency of experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SS8-Freq</td>
<td></td>
<td>Worry about keeping up with others in the class</td>
</tr>
<tr>
<td>SS10-Freq</td>
<td></td>
<td>Have concerns about the difficulty of some subjects</td>
</tr>
<tr>
<td>SS11-Freq</td>
<td></td>
<td>Have concerns about homework or assignments</td>
</tr>
<tr>
<td>SS13-Freq</td>
<td></td>
<td>Worry about grades at school</td>
</tr>
<tr>
<td><strong>Endogenous Latent Variables</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Sexual harassment – appraisal of experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SH7-Appr</td>
<td></td>
<td>Put down females in general</td>
</tr>
<tr>
<td>SH11-Appr</td>
<td></td>
<td>Made a sexual gesture or stared at your body in a sexual way</td>
</tr>
<tr>
<td>SH13-Appr</td>
<td></td>
<td>Yelled something sexual or whistled or howled at you when you walked by</td>
</tr>
<tr>
<td>SH14-Appr</td>
<td></td>
<td>Touched, grabbed, or pinched you in a sexual way</td>
</tr>
<tr>
<td>4. School stressors – appraisal of experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SS8-Appr</td>
<td></td>
<td>Worry about keeping up with others in the class</td>
</tr>
<tr>
<td>SS10-Appr</td>
<td></td>
<td>Have concerns about the difficulty of some subjects</td>
</tr>
<tr>
<td>SS11-Appr</td>
<td></td>
<td>Have concerns about homework or assignments</td>
</tr>
<tr>
<td>SS13-Appr</td>
<td></td>
<td>Worry about grades at school</td>
</tr>
<tr>
<td>5. Responses to harassment – frequency</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cope7</td>
<td></td>
<td>I stayed away from him/her as much as possible</td>
</tr>
<tr>
<td>Cope9</td>
<td></td>
<td>I let him or her know that I didn’t like what he/she was doing</td>
</tr>
<tr>
<td></td>
<td>Perceived self-worth</td>
<td>SWorth3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SWorth4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SWorth5</td>
</tr>
<tr>
<td>7.</td>
<td>Depression – frequency of symptoms</td>
<td>Dep6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dep14</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dep17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dep18</td>
</tr>
<tr>
<td>8.</td>
<td>Physical health effects – frequency of experience</td>
<td>PhysEff2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PhysEff3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PhysEff4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PhysEff7</td>
</tr>
<tr>
<td>9.</td>
<td>Health-risk behaviours – frequency</td>
<td>Smoke</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Drink</td>
</tr>
<tr>
<td>10.</td>
<td>Health-promoting behaviours – frequency</td>
<td>HP-Slp</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HP-Ex</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HP-Nutr</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 16  
Scaling of the Indicator Variables

<table>
<thead>
<tr>
<th>Latent Variables</th>
<th>Scaling and Recoding of Indicator Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sexual Harassment – Frequency</td>
<td>Higher scores indicate more frequent experiences of sexual harassment (0 = never, 5 = daily or almost daily).</td>
</tr>
<tr>
<td>School Stressors - Frequency</td>
<td>Higher scores indicate more frequent experiences of stress (0 = never, 5 = daily or almost daily).</td>
</tr>
<tr>
<td>Sexual Harassment – Appraisal</td>
<td>Measures the reaction of the person to the stressors reported in the first part of the question on frequency. Higher scores indicate more upsetting or more stressful experiences of sexual harassment. The original response scale ranged from 0 (not stressful) to 4 (very stressful) for those respondents who had been the targets of that particular behaviour. The response 0 was also used to indicate that the item was not applicable because the experience had never happened (i.e., frequency was 0). Responses for those respondents who had experienced the behaviour were recoded from 1 to 5. Responses originally coded as “not applicable/never happened” remained coded as 0. The new response scale remains theoretically consistent because the frequency question asks how often the harassment behaviour occurred “when you did not want it to”, thus implying some degree of undesirability. The recoding avoids treating a non-occurrence as equivalent to having experienced the behaviour and appraised it as non-threatening—this became particularly important when using weighted sexual harassment variables (frequency x appraisal) later in the modelling procedures.</td>
</tr>
<tr>
<td>School Stressors – Appraisal</td>
<td>As above for Sexual Harassment – Appraisal.</td>
</tr>
<tr>
<td>Responses to Harassment</td>
<td>Higher scores indicate more frequent use (0 = never, 4 = all or almost all of the time).</td>
</tr>
<tr>
<td>Perceived Self-Worth</td>
<td>Higher scores (on a scale of 1 – 4) indicate more positive self-perception.</td>
</tr>
<tr>
<td>Depression</td>
<td>Higher scores indicate more frequent experiences of depressive symptoms (0 = rarely or none of the time, 3 = all or most of the time).</td>
</tr>
<tr>
<td>Physical Health Effects</td>
<td>Higher scores indicate more frequent experiences of physical health complaints (0 = seldom or never, 4 = most days).</td>
</tr>
<tr>
<td>Health-Risk Behaviours</td>
<td>Higher scores indicate more frequent health-risk behaviours. The original response scale of 1 (not at all) to 6 (every day or almost every day) was recoded as 0 to 5.</td>
</tr>
<tr>
<td>Health-Promoting Behaviours</td>
<td>Higher scores indicate more frequent health-promoting behaviours. The original response scale of 1 (never) to 5 (daily) was recoded as 0 to 4.</td>
</tr>
</tbody>
</table>
variables (e.g., appraisal of sexual harassment and school stressors) were recoded for the modelling analyses, and the recoding is also described.

**Preliminary Confirmatory Factor Analyses**

Separate confirmatory factor analyses were conducted for some of the latent variables (sexual harassment, school stressors, and health-promoting variables) prior to analyzing the full measurement model. This decision was based on information obtained through some of the earlier descriptive statistical analysis, and the importance of the exogenous variables to the model.

*Sexual Harassment and School Stressors.* The original proposed model situates appraisal (of sexual harassment and of other school stressors) as a mediator between the frequency of the stressor and the health outcomes. I had hypothesized that a stressor would be appraised as a more upsetting event as the experience increased in frequency. As an initial step in the analysis, a confirmatory factor analysis model was performed for the four proposed factors of Sexual Harassment-Frequency, Sexual Harassment-Appraisal, School Stressors-Frequency, and School Stressors-Appraisal, with 4 manifest variables per latent variable as indicated in Table 15. I evaluated the overall fit of this and all subsequent models using a number of indices: the chi-square $p$ value, Root Mean Square Error of Approximation (RMSEA), LISREL Goodness-of-Fit Index (GFI), Non-Normed Fit Index (NNFI), Comparative Fit Index (CFI), Expected Cross-Validation Index (ECVI), and the Standardized Root Mean Square Residual (SRMR), as described in Chapter 4.

The measurement model indicated a very poor overall fit, with $\chi^2 (98) = 908, p < .001$, RMSEA = 0.156, GFI = 0.75, NNFI = 0.64, CFI = 0.70, ECVI = 2.89, and SRMR = .076. The largest standardized residuals and largest modification indices for Theta-Delta (the matrix of
error terms) suggested that there were strong correlations between the error terms for each frequency variable and its corresponding appraisal variable (e.g., between SH7-Freq and SH7-Appr, or between SS11-Freq and SS11-Appr). This was supported by an examination of the bivariate correlation tables which showed higher correlations between each pair of frequency and appraisal variables than between the indicator variables for each latent factor. For example, the correlations between the frequency variables for School Stressors 8, 10, 11, and 13 ranged from .53 to .62, whereas the correlations of those same variables with the corresponding appraisal variable ranged from .77 to .82.

In the proposed theoretical model, frequency is modelled as an exogenous variable, whereas appraisal is situated as endogenous variable. Although it is possible to correlate Theta-Delta and Theta-Epsilon error terms (for the exogenous and endogenous manifest variables, respectively) in LISREL 8.3, I chose to collapse each pair of frequency and appraisal variables into one “weighted” variable of their products. This is consistent with Lazarus and Folkman’s (1984) theory that the event is a stressor only as it is appraised to be a threat (i.e., in terms of the person’s subjective experience). It is also consistent with the scoring of the Adolescent Perceived Events Scale by Compas and colleagues (Compas, 1997; Wagner & Compas, 1990) from which the school stressor items were drawn. The two new weighted exogenous variables, when allowed to co-vary, also better represent the appraisal component as both primary and secondary appraisal than did the original configuration. In this situation, it is the latter (appraisal of the person’s ability to deal with the threat) that would more likely be influenced by the accumulation of stressors that draw upon the person’s access to resources and ability to cope. Finally, it was necessary to perform square root transformation on the new weighted variables because several of them exhibited serious non-normality (skewness or kurtosis values > 2.0).
The generally weighted least-squares estimation method is another means of handling non-normal data (Bollen, 1989, p. 432; Jöreskog & Sörbom, 1999) but its use was deemed inappropriate given the sample size in this study, as previously discussed in Chapter 4. Thus, the four latent variables of Sexual Harassment-Frequency, Sexual Harassment-Appraisal, School Stressors-Frequency, and School Stressors-Appraisal were replaced by two correlated latent variables representing the appraised experiences of Sexual Harassment and other School Stressors, each with four new indicator variables (SQSH 7, 11, 13, 15 and SQSS 8, 10, 11, 13) which are equal to the square root of the product of the frequency and appraisal of each event. The revised structural model is presented in Figure 2.

**Health-Promoting Behaviours.** An examination of bivariate correlations for the three indicators initially proposed for the latent variable Health-Promoting Behaviours (sleep, exercise, and nutrition) indicated low correlations ranging from -.013 to .227 and a low reliability coefficient ($\alpha = .29$) for the female sub-sample. Therefore, a separate confirmatory factor analysis was also performed for this factor. Depending upon which of the three variables was used as a referent variable, with Lambda-X fixed at 1.0 to establish a common metric, the model either failed to converge or produced an uninterpretable solution with Phi found to be not positive definite. I therefore chose to use HP-Nutrition as a single indicator variable for Health-Promoting Behaviours (this variable showed the widest spread of responses and most normal histogram), and renamed the latent variable as Health-Promoting (HP) Nutrition Behaviours. Therefore, the first full measurement model to be tested consisted of 8 latent variables and 24 indicator variables (see Figure 3). Table 17 presents the descriptive statistics (means, standard deviations, ranges, and skewness and kurtosis) for the indicator variables used in the measurement model. Table 18 reports the zero-order correlations among the indicator variables.
Figure 3. Measurement Model 1

Note: Measurement error terms (TD) and intercorrelations between all latent variables (Phi) are not shown.
Table 17
Descriptive Statistics of Indicator Variables used in Structural Equation Modelling for Female Sub-Sample

<table>
<thead>
<tr>
<th>Variable</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>SD</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>SQSH7</td>
<td>0</td>
<td>5</td>
<td>1.29</td>
<td>1.24</td>
<td>.76</td>
<td>.09</td>
</tr>
<tr>
<td>SQSH11</td>
<td>0</td>
<td>5</td>
<td>1.14</td>
<td>1.11</td>
<td>.83</td>
<td>.47</td>
</tr>
<tr>
<td>SQSH13</td>
<td>0</td>
<td>5</td>
<td>1.09</td>
<td>1.06</td>
<td>.9</td>
<td>.75</td>
</tr>
<tr>
<td>SQSH14</td>
<td>0</td>
<td>4</td>
<td>0.88</td>
<td>1.09</td>
<td>.93</td>
<td>-.19</td>
</tr>
<tr>
<td>SQSS8</td>
<td>0</td>
<td>5</td>
<td>2.08</td>
<td>1.43</td>
<td>.34</td>
<td>-.63</td>
</tr>
<tr>
<td>SQSS10</td>
<td>0</td>
<td>5</td>
<td>2.75</td>
<td>1.40</td>
<td>-.01</td>
<td>-.85</td>
</tr>
<tr>
<td>SQSS11</td>
<td>0</td>
<td>5</td>
<td>2.55</td>
<td>1.37</td>
<td>.03</td>
<td>-.69</td>
</tr>
<tr>
<td>SQSS13</td>
<td>0</td>
<td>5</td>
<td>2.87</td>
<td>1.55</td>
<td>-.14</td>
<td>1.06</td>
</tr>
<tr>
<td>COPE7</td>
<td>0</td>
<td>4</td>
<td>1.00</td>
<td>1.36</td>
<td>1.07</td>
<td>-.28</td>
</tr>
<tr>
<td>COPE9</td>
<td>0</td>
<td>4</td>
<td>0.85</td>
<td>1.27</td>
<td>1.39</td>
<td>.72</td>
</tr>
<tr>
<td>SWorth3</td>
<td>1</td>
<td>4</td>
<td>2.68</td>
<td>0.92</td>
<td>-.29</td>
<td>-.71</td>
</tr>
<tr>
<td>SWorth4</td>
<td>1</td>
<td>4</td>
<td>2.91</td>
<td>0.86</td>
<td>-.45</td>
<td>-.45</td>
</tr>
<tr>
<td>SWorth5</td>
<td>1</td>
<td>4</td>
<td>2.72</td>
<td>0.95</td>
<td>-.26</td>
<td>-.83</td>
</tr>
<tr>
<td>Dep6</td>
<td>0</td>
<td>3</td>
<td>1.32</td>
<td>1.06</td>
<td>.22</td>
<td>1.18</td>
</tr>
<tr>
<td>Dep14</td>
<td>0</td>
<td>3</td>
<td>1.08</td>
<td>1.09</td>
<td>.58</td>
<td>-.98</td>
</tr>
<tr>
<td>Dep17</td>
<td>0</td>
<td>3</td>
<td>0.94</td>
<td>1.03</td>
<td>.77</td>
<td>-.64</td>
</tr>
<tr>
<td>Dep18</td>
<td>0</td>
<td>3</td>
<td>1.24</td>
<td>1.01</td>
<td>.36</td>
<td>-.95</td>
</tr>
<tr>
<td>Smoke</td>
<td>0</td>
<td>5</td>
<td>1.50</td>
<td>2.06</td>
<td>.90</td>
<td>-.97</td>
</tr>
<tr>
<td>Drink</td>
<td>0</td>
<td>5</td>
<td>1.15</td>
<td>1.08</td>
<td>.45</td>
<td>.79</td>
</tr>
<tr>
<td>PhysEff2</td>
<td>0</td>
<td>4</td>
<td>2.76</td>
<td>1.17</td>
<td>.52</td>
<td>-.92</td>
</tr>
<tr>
<td>PhysEff3</td>
<td>0</td>
<td>4</td>
<td>2.03</td>
<td>1.31</td>
<td>.06</td>
<td>1.17</td>
</tr>
<tr>
<td>PhysEff4</td>
<td>0</td>
<td>4</td>
<td>2.13</td>
<td>1.31</td>
<td>.04</td>
<td>-1.22</td>
</tr>
<tr>
<td>PhysEff7</td>
<td>0</td>
<td>4</td>
<td>1.55</td>
<td>1.10</td>
<td>.75</td>
<td>-.07</td>
</tr>
<tr>
<td>HP-Nutr</td>
<td>0</td>
<td>4</td>
<td>1.51</td>
<td>0.97</td>
<td>.50</td>
<td>-.45</td>
</tr>
</tbody>
</table>

\( ^a \) n = 348, number of responses range from 315 - 348 per variable.
Table 18
Zero-Order Correlations\(^a\) Among Indicator Variables used in Structural Equation Modelling for Female Sub-Sample\(^b\)

|       | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    | 11    | 12    | 13    | 14    | 15    | 16    | 17    | 18    | 19    | 20    | 21    | 22    | 23    |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 SQSH7 | ---   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 2 SQSH11 | 40    | ---   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 3 SQSH13 | 34    | 63    | ---   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 4 SQSH14 | 32    | 59    | 49    | ---   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 5 SQSS8  | 18    | 18    | 13    | 17    | ---   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 6 SQSS10 | 13    | 25    | 22    | 21    | 60    | ---   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 7 SQSS11 | 22    | 21    | 15    | 19    | 55    | 62    | ---   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 8 SQSS13 | 13    | 24    | 19    | 18    | 58    | 65    | 55    | ---   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 9 Cope7  | 22    | 28    | 28    | 16    | 09    | 06    | 11    | 13    | ---   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 10 Cope9 | 23    | 26    | 22    | 19    | 10    | 01    | 06    | 12    | 41    | ---   |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 11 Sworth3 | -12   | -07   | -04   | -07   | -20   | -20   | -15   | -20   | -04   | 06    | ---   |       |       |       |       |       |       |       |       |       |       |       |       |
| 12 Sworth4 | -15   | -08   | -03   | -06   | -18   | -14   | -11   | -17   | -03   | 04    | 63    | ---   |       |       |       |       |       |       |       |       |       |       |       |
| 13 Sworth5 | -10   | -12   | -03   | -06   | -25   | -19   | -11   | -23   | -06   | 06    | 64    | 71    | ---   |       |       |       |       |       |       |       |       |       |       |
| 14 Dep6  | 26    | 26    | 20    | 19    | 33    | 27    | 34    | 38    | 19    | 13    | -42   | -36   | -35   | ---   |       |       |       |       |       |       |       |       |       |
| 15 Dep14 | 26    | 27    | 18    | 19    | 33    | 26    | 33    | 31    | 26    | 16    | -36   | -24   | -27   | 62    | ---   |       |       |       |       |       |       |       |       |       |
| 16 Dep17 | 24    | 22    | 20    | 17    | 22    | 17    | 15    | 18    | 19    | 20    | -31   | -26   | -24   | 50    | 52    | ---   |       |       |       |       |       |       |       |
| 18 Smoke | 16    | 15    | 15    | 24    | 06    | 08    | 01    | 08    | 08    | -01   | -18   | -21   | -12   | 20    | 17    | 15    | 13    | ---   |       |       |       |       |       |
| 19 Drink | 11    | 21    | 18    | 24    | 00    | 10    | 04    | 05    | 05    | 06    | -15   | -14   | -04   | 15    | 08    | 13    | 10    | 49    | ---   |       |       |       |       |
| 20 PhysEff2 | 20    | 20    | 16    | 18    | 24    | 27    | 26    | 27    | 17    | 17    | -29   | -21   | -21   | 44    | 32    | 29    | 36    | 20    | 24    | ---   |       |       |
| 21 PhysEff3 | 15    | 11    | 15    | 10    | 13    | 20    | 18    | 17    | 13    | 09    | -22   | -24   | -17   | 28    | 22    | 18    | 23    | 27    | 11    | 35    | ---   |       |
| 22 PhysEff4 | 21    | 16    | 17    | 13    | 17    | 15    | 12    | 17    | 21    | 16    | -10   | -10   | -03   | 24    | 19    | 21    | 20    | 24    | 17    | 44    | 36    | ---   |
| 23 PhysEff7 | 18    | 20    | 18    | 15    | 29    | 26    | 23    | 27    | 16    | 15    | -25   | -21   | -16   | 33    | 28    | 23    | 31    | 23    | 16    | 39    | 41    | 41    | ---   |
| 24 HP - Nutr | -05   | -12   | -06   | -12   | -11   | -12   | -01   | -13   | 00    | 01    | 20    | 22    | 18    | -23   | -20   | -17   | -20   | -32   | -15   | -09   | -23   | -11   | -19   |

Note.
\(^a\) Decimal points have been omitted in the correlations. Bold print shows significance at \(p \leq .05\) for single bivariate tests.
\(^b\) \(n = 299\), listwise deletion
(for interpretation purposes), although it was the covariance matrix that was analyzed with LISREL.

**Analysis of the Measurement Model**

The measurement model was tested in a confirmatory factory analysis to establish the reliability and validity of the indicators. For each of the factors except HP Nutrition Behaviours, one Lambda-X pathway was set to the value of 1.0 to establish a common measurement scale. The pathway from the single indicator to HP Nutrition Behaviours was assigned an initial factor loading of .64 (equivalent to an estimated reliability level of .80, squared), and the error term (Theta-Delta) was set at .36 (1.0 minus the factor loading). All factors were allowed to covary.

The overall fit of the measurement model was good with RMSEA = 0.021, GFI = 0.93, NNFI = 0.98, CFI = 0.98, ECVI = 1.35, SRMR = .045, and $\chi^2$ (225) = 255, $p = .08$. The parameter estimates were all statistically significant at $t \geq 1.96$, and all indicators loaded on the factors as hypothesized, although the completely standardized Lambda-X value for sexual harassment item 7 (derogatory comments about females) was only 0.48, with a corresponding error term of 0.77. (A "completely standardized" solution indicates that both the observed and latent variables are standardized.) All other factor loadings were $\geq 0.60$.

The weak loading of sexual harassment item 7 suggests that harassment experiences related to one's gender may be experienced differently than harassment experiences that are related to more "sexual" matters, and is consistent with the original conceptualization of the scale used in this study and in other research (e.g., Collinsworth, 1997; Fitzgerald, Gelfand, & Drasgow, 1995). Therefore, the measurement model was modified by delineating Gender Harassment as a separate factor, with SQSH7 as the single indicator, and by fixing the path coefficient and error term at .64 and .36, respectively.
Other potential modifications were considered based on modification indices, standardized residual matrices, correlations between variables, and the apparent meaning of items. The largest modification index for the Lambda-X and Theta-Delta matrices (indicating the largest decrease in the chi-square value) was found in the Theta-Delta matrix for Dep17 and 18 (MI = 21.61). This pair of indicator variables also yielded the largest standardized residual (4.48), and demonstrated one of the highest bivariate correlations ($r = .65$). Because it is not unreasonable to expect that respondents may have based their assessment of "being sad" (Dep18) on their experience of “having cried” (Dep17), the error term between Dep17 and Dep18 was “freed” or allowed to correlate within the revised measurement model. The revised model, with 9 factors and 24 indicator variables, is presented in Figure 4.

As indicated in Table 19 the revised measurement model provided an excellent fit to the data, $\chi^2 (217) = 221, \ p = .41$. The chi-square difference test indicated a substantial improvement in fit, $\chi^2 (8) = 34.4, p < .001$, and all other fit measures showed slight improvements in fit. The decreased values in RMSEA, ECVI and SRMR indicate smaller residuals.

<table>
<thead>
<tr>
<th></th>
<th>$\chi^2$ (df)</th>
<th>$p$</th>
<th>RMSEA</th>
<th>GFI</th>
<th>NNFI</th>
<th>CFI</th>
<th>ECVI</th>
<th>SRMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1</td>
<td>255.4 (225)</td>
<td>.080</td>
<td>.021</td>
<td>0.93</td>
<td>0.98</td>
<td>0.98</td>
<td>1.35</td>
<td>.045</td>
</tr>
<tr>
<td>Model 2</td>
<td>221.0 (217)</td>
<td>.412</td>
<td>.008</td>
<td>0.94</td>
<td>0.99</td>
<td>0.99</td>
<td>1.29</td>
<td>.038</td>
</tr>
<tr>
<td>Difference</td>
<td>34.4 (8)</td>
<td>&lt; .001</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* RMSEA = Root Mean Square Error of Approximation; GFI = Goodness of Fit Index; NNFI = Non-Normed Fit Index; CFI = Comparative Fit Index; ECVI = Expected Cross-Validation Index; SRMR = Standardized Root Mean Square Residual. Model 2 = With two harassment factors and correlated error terms for Dep 17,18.
EXOGENOUS LATENT VARIABLES

SQSH 7
Gender Harassment Freq x Appr

SQSH 11

SHSH 13

SQSH 14

SQSBS 8

SQSBS 10

SQSBS 11

SQSBS 13

ENDOGENOUS LATENT VARIABLES

Responses To Harassment
Cope 7
Cope 9
Self Worth 3
Self Worth 4
Self Worth 5

Perceived Self-Worth
Dep 6
Dep 14
Dep 17
Dep 18

Depression
Smoke
Drink

Health-Risk Behaviours
PhysEff 2
PhysEff 3
PhysEff 4
PhysEff 7

Physical Health Effects

HP Nutrition Behaviours
HP-Nutr

Figure 4. Measurement Model 2
Note: Measurement error terms (TD) and intercorrelations between all latent variables (Phi) are not shown.
All estimated parameters remained statistically significant, and were of acceptable strength, with the weakest being 0.58 for Physical Health Effects item 3 (see Table 20). The average factor loadings ranged from 0.64 for the latent variable Responses to Harassment to .81 for Perceived Self-Worth. The average loadings for Sexual Harassment and School Stressors were .76 and .77, respectively.

Table 20 also reports internal consistency reliability estimates (Cronbach’s Alpha) for each set of indicator variables. Although four of the seven factors with multiple indictors had alphas ≥ .80, Responses to Harassment and Health-Risk Behaviours showed the lowest alpha levels, at .57 and .58, respectively. Notwithstanding that each of these are comprised of only two items, the lower alphas do suggest that at least some of the variance in the latent variable is due to measurement error.

An examination of the covariance matrix for the latent variables (Phi) indicated that Gender Harassment and Sexual Harassment had a moderately strong relationship, but still performed as separate factors. The completely standardized covariance was .52; the covariance between School Stress and Gender Harassment and Sexual Harassment was .24. and .33, respectively. Thus, revisions to the measurement model were supported and no further modifications were made.
### Table 20
Measurement Model 2 Factor Loadings and \( t \)-values

<table>
<thead>
<tr>
<th>Latent Variable</th>
<th>( \alpha )</th>
<th>Item</th>
<th>Loading (^a)</th>
<th>( t )-value (^b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender Harassment</td>
<td>---</td>
<td>SQSH7</td>
<td>0.88</td>
<td>--- (^c)</td>
</tr>
<tr>
<td>Sexual Harassment</td>
<td>0.80</td>
<td>SQSH11</td>
<td>0.86</td>
<td>12.16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SQSH13</td>
<td>0.73</td>
<td>--- (^d)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SQSH14</td>
<td>0.68</td>
<td>10.77</td>
</tr>
<tr>
<td>School Stressors</td>
<td>0.86</td>
<td>SQSBS8</td>
<td>0.75</td>
<td>12.83</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SQSBS10</td>
<td>0.82</td>
<td>14.09</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SQSBS11</td>
<td>0.74</td>
<td>12.72</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SQSBS13</td>
<td>0.78</td>
<td>--- (^d)</td>
</tr>
<tr>
<td>Responses to Harassment</td>
<td>0.57</td>
<td>COPE7</td>
<td>0.64</td>
<td>5.88</td>
</tr>
<tr>
<td></td>
<td></td>
<td>COPE9</td>
<td>0.63</td>
<td>--- (^d)</td>
</tr>
<tr>
<td>Self Worth</td>
<td>0.86</td>
<td>SWorth3</td>
<td>0.78</td>
<td>--- (^d)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SWorth4</td>
<td>0.83</td>
<td>14.06</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SWorth5</td>
<td>0.83</td>
<td>14.10</td>
</tr>
<tr>
<td>Depression</td>
<td>0.85</td>
<td>Dep6</td>
<td>0.81</td>
<td>--- (^d)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dep14</td>
<td>0.78</td>
<td>13.60</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dep17</td>
<td>0.63</td>
<td>10.44</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dep18</td>
<td>0.78</td>
<td>13.55</td>
</tr>
<tr>
<td>Health-Risk Behaviours</td>
<td>0.58</td>
<td>Smoke</td>
<td>0.84</td>
<td>--- (^d)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Drink</td>
<td>0.59</td>
<td>6.04</td>
</tr>
<tr>
<td>Physical Health Effects</td>
<td>0.71</td>
<td>PhysEff2</td>
<td>0.67</td>
<td>7.95</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PhysEff3</td>
<td>0.58</td>
<td>--- (^c)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PhysEff4</td>
<td>0.61</td>
<td>7.51</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PhysEff7</td>
<td>0.65</td>
<td>7.84</td>
</tr>
<tr>
<td>HP Nutrition Behaviours</td>
<td>---</td>
<td>HP-Nutrition</td>
<td>0.78</td>
<td>--- (^c)</td>
</tr>
</tbody>
</table>

*Note.*

\(^a\) Completely standardized solution. \(^b\) All \( t \)-values are significant at \( p < .05 \).

\(^c\) Lamda-X fixed at 0.64 for the single item indicator, therefore no \( t \)-value produced.

\(^d\) Lamda-X fixed at 1.00 to set the measurement scale for the reference indicator, therefore no \( t \)-value produced.
The Structural Model

After confirming the relationship between the observed variables and the latent variables in the measurement model, the next step of the analysis was to test the hypothesized structural relations among the latent variables. In the structural modelling procedure, Gamma pathways (between exogenous and endogenous variables) and Beta pathways (between endogenous variables) are either fixed at zero (i.e., the latent variables are not allowed to correlate) or freed (i.e., relationships are estimated).

Structural Model #1

The first structural model to be tested is presented in Figure 5. The model postulates that the health and health-related behaviours of adolescent females are indirectly affected by the frequency with which they experience gender harassment and sexual harassment, and their appraisals of those experiences, as mediated by their behavioural coping responses to the harassment. The model also indicates that some of the health outcomes may be attributable to other school-based stressors. All three types of stressors include an appraisal component within the exogenous variable. The model also postulates that physical health and health-related behaviours are further influenced by the person's psychological responses to the various stressors. (Coping strategies for dealing with school-based stressors were not included in the model due to the emphasis of the study on sexual harassment stressors.)

The initial structural model demonstrated a good overall fit to the data, with $\chi^2 (232) = 249.8, p = .201$. The RMSEA was .016, which is excellent, as were the NNFI and CFI at 0.99. The SRMR and GFI were also satisfactory at .048 and 0.94, respectively. Thirteen of the 18 parameter estimates were found to be statistically significant (at $p < .05$) and, except for the Beta pathways from Responses to Harassment to Depression and Physical Health Effects, each
Figure 5. Structural Model 1
*Note. *p ≤ .05, ns = non-significant at p > .05
was in the direction expected. (The pathways in Figure 5 are marked with the completely standardized parameter estimates.) The Gamma paths from School Stressors to Health-Risk Behaviours and Health-Promoting Nutrition Behaviours were non-significant, as were the Beta paths from Responses to Harassment to Self-Worth, Health-Risk Behaviours, and HP Nutrition Behaviours. Nonetheless, an examination of the squared multiple correlations for the structural equations indicated that the variance in Perceived Self-Worth and Health-Risk Behaviours was poorly explained by the initial structural model ($R^2 = .08$ and .07, respectively).

**Modifications to the Model.** Revisions to the structural model were considered only if theoretically justified. Some previous research studies have found direct effects from the stressor to health outcomes even when coping variables are included in the model (e.g., Maio-Esteves, 1990), and, indeed, modification indices for the Gamma matrix suggested that the model would be most strengthened by freeing pathways from Gender Harassment to Health-Risk Behaviours ($MI = 4.59$), Perceived Self Worth ($MI = 4.27$), and Depression ($MI = 3.61$) and by freeing the pathway from Sexual Harassment to Health-Risk Behaviours ($MI = 10.44$). The standardized expected changes also indicated that the freed path coefficients would be in the direction expected. I chose to add direct paths from the two harassment variables to Health-Risk Behaviours because adolescents may engage in smoking and drinking behaviours as a direct means of coping with the stressful experience. I also added direct paths to Perceived Self-Worth and Depression from Gender Harassment because the behaviour used as the sole indicator variable for Gender Harassment (*put down females in general*) may be so mundane that it does not evoke strong behavioural coping responses. Furthermore, it seems reasonable that one’s global self-assessment could be influenced by others’ views and valuing of one’s gendered identity, and that such behaviours could also directly lead to a negative emotional state
such as depression. A final consideration in adding the direct pathways was the understanding that, as conceptualized and operationalized, the latent variable Responses to Harassment (indicators = avoiding or confronting the perpetrator) was only partially capturing the concept of "coping" as suggested by stress and coping theory. Furthermore, the two indicator variables yielded somewhat low parameter estimates of 0.64 and 0.63 in Measurement Model 2. Thus, there may be additional effects of gender and sexual harassment that are not mediated by the individual’s behavioural responses to the harasser.

**Structural Model #2**

Fit information for the revised model is reported in Table 21. The chi-square statistic decreased from 249.8 ($p = .201$) to 230.2 ($p = .446$), with a difference statistic of $\chi^2 (4) = 19.6$, $p < .001$, indicating greater plausibility of the model for the population studied. The RMSEA, ECVI and SRMR indices also showed slight improvements. The squared multiple correlations for Perceived Self-Worth ($R^2 = .10$) and Health-Risk Behaviours ($R^2 = .16$) remain low but are improved over Model 1, indicating that some of the variance in health outcomes is explained by the direct effects of harassment. Table 22 also indicates that factor loadings from the latent variables to the observed variables changed only minimally (+/- 0.01) compared with the results for Measurement Model 2.

**Table 21**

**Goodness-of-Fit Indices for Structural Models**

<table>
<thead>
<tr>
<th></th>
<th>$\chi^2$ (df)</th>
<th>$p$</th>
<th>RMSEA</th>
<th>GFI</th>
<th>NNFI</th>
<th>CFI</th>
<th>ECVI</th>
<th>SRMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1</td>
<td>249.8 (232)</td>
<td>.201</td>
<td>.016</td>
<td>0.94</td>
<td>0.99</td>
<td>0.99</td>
<td>1.28</td>
<td>.049</td>
</tr>
<tr>
<td>Model 2</td>
<td>230.2 (228)</td>
<td>.446</td>
<td>.006</td>
<td>0.94</td>
<td>1.00</td>
<td>1.00</td>
<td>1.24</td>
<td>.041</td>
</tr>
<tr>
<td>Difference</td>
<td>19.6 (4)</td>
<td>&lt; .001</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* Model 1 = No direct paths from Gender Harassment and Sexual Harassment to health outcome variables. Model 2 = Added 4 direct paths from Gender Harassment and Sexual Harassment to health outcome variables.
Table 22
Structural Model 2 Factor Loadings and t-values

<table>
<thead>
<tr>
<th>Latent Variable</th>
<th>α</th>
<th>Item</th>
<th>Loading&lt;sup&gt;a&lt;/sup&gt;</th>
<th>t-value&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender Harassment</td>
<td>---</td>
<td>SQSH7</td>
<td>0.88</td>
<td>--- c</td>
</tr>
<tr>
<td>Sexual Harassment</td>
<td>.80</td>
<td>SQSH11</td>
<td>0.85</td>
<td>12.16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SQSH13</td>
<td>0.74</td>
<td>--- d</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SQSH14</td>
<td>0.68</td>
<td>10.77</td>
</tr>
<tr>
<td>School Stressors</td>
<td>.86</td>
<td>SQSBS8</td>
<td>0.75</td>
<td>12.84</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SQSBS10</td>
<td>0.82</td>
<td>14.09</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SQSBS11</td>
<td>0.74</td>
<td>12.72</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SQSBS13</td>
<td>0.78</td>
<td>--- d</td>
</tr>
<tr>
<td>Responses to Harassment</td>
<td>.57</td>
<td>COPE7</td>
<td>0.64</td>
<td>5.90</td>
</tr>
<tr>
<td></td>
<td></td>
<td>COPE9</td>
<td>0.63</td>
<td>--- d</td>
</tr>
<tr>
<td>Self-Worth</td>
<td>.86</td>
<td>SWorth3</td>
<td>0.78</td>
<td>--- d</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SWorth4</td>
<td>0.82</td>
<td>13.99</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SWorth5</td>
<td>0.84</td>
<td>14.11</td>
</tr>
<tr>
<td>Depression</td>
<td>.85</td>
<td>Dep6</td>
<td>0.81</td>
<td>--- d</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dep14</td>
<td>0.77</td>
<td>13.60</td>
</tr>
<tr>
<td></td>
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<td>Dep17</td>
<td>0.62</td>
<td>10.47</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dep18</td>
<td>0.78</td>
<td>13.58</td>
</tr>
<tr>
<td>Health-Risk Behaviours</td>
<td>.58</td>
<td>Smoke</td>
<td>0.84</td>
<td>--- d</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Drink</td>
<td>0.59</td>
<td>6.08</td>
</tr>
<tr>
<td>Physical Health Effects</td>
<td>.71</td>
<td>PhysEff2</td>
<td>0.67</td>
<td>7.91</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PhysEff3</td>
<td>0.57</td>
<td>--- c</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PhysEff4</td>
<td>0.61</td>
<td>7.49</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PhysEff7</td>
<td>0.65</td>
<td>7.79</td>
</tr>
<tr>
<td>HP Nutrition Behaviours</td>
<td>---</td>
<td>HP-Nutrition</td>
<td>0.78</td>
<td>--- c</td>
</tr>
</tbody>
</table>

Note.
<sup>a</sup> Completely standardized solution.
<sup>b</sup> All t-values are significant at $p \leq .05$.
<sup>c</sup> Lamda-X fixed at 0.64 for the single item indicator, therefore no t-value produced.
<sup>d</sup> Lamda-X fixed at 1.00 to set the measurement scale for the reference indicator, therefore no t-value produced.
The revised structural model is depicted in Figure 6; pathways are marked with the completely standardized parameter estimates. Fourteen of the 22 parameter estimates were statistically significant ($t$-values $\geq 1.96$) and, except for the paths from Responses to Harassment to Depression and Physical Health Effects, were in the expected direction. Of the four Gamma pathways that were added in model 2, two were not supported by the data: Gender Harassment to Depression ($\gamma = .11, t = 1.54$) and Gender Harassment to Health-Risk Behaviours ($\gamma = .08, t = 0.79$). Additionally, the Gamma pathway from Gender Harassment to the behavioural coping variable became non-significant ($\gamma = .18, t = 1.80$).

**Testing the Mediating Effects of Response to Harassment**

In order to test the mediating effects of behavioural coping responses, a third structural model was analyzed. A mediating relationship is indicated when there is a significant direct relationship between the predictor (P) and outcome variable (O) that decreases in absolute size and becomes non-significant when the mediator variable (M) is included in the model (Baron & Kenny, 1986; Lindley & Walker, 1993), as indicated below in Figure 7. A mediating relationship also requires that there be statistically significant relationships between the predictor variable and the mediating variable, and between the mediating variable and the outcome variable.

![Mediational Model](image.png)

(a) Without mediator in the model

(b) With mediator in the model

**Figure 7. Medialional Model**
Figure 6. Structural Model 2

Note. Dotted lines represent paths added in Model 2. * $p \leq .05$, ns = non-significant at $p > .05$. 
Structural Model 3 (see Figure 8) excludes the hypothesized mediator, Responses to Harassment (as in Figure 7, diagram a), but includes additional direct paths from Sexual Harassment to Depression and Physical Health Effects. The latter were added because of the statistically significant direct paths that were found, in Structural Model 2, from Responses to Harassment to these two outcome variables.

As indicated in Figure 8, the unmediated, direct paths (in Structural Model 3) from Gender Harassment to Depression ($\gamma = .19, t = 2.74$) and from Sexual Harassment to Health-Risk Behaviours ($\gamma = .25, t = 2.77$) are statistically significant, but not strong. In the mediated model (Structural Model 2), the pathway from Gender Harassment to Depression is statistically non-significant ($\gamma = .11, t = 1.54$) as is expected in a mediated relationship; however, the pathway from Gender Harassment to the hypothesized mediator is also non-significant ($\gamma = .18, t = 1.80$). Thus, although the relationships are in the expected direction, the relationship between Gender Harassment and the coping variable is not sufficiently strong to support a mediated relationship between Gender Harassment and Depression. The data also fail to support a mediated relationship between Sexual Harassment and Health-Risk Behaviours as the pathway between them is statistically significant, and roughly equivalent, in both the mediated and unmediated models. Secondly, the pathway between the behavioural coping variable and Health-Risk Behaviours only nears statistical significance ($\gamma = -.22, t = 1.92$) in Structural Model 2. Finally, the other non-significant direct paths, from Gender Harassment to Perceived Self-Worth and Health-Risk Behaviours, and from Sexual Harassment to Depression and Physical Health Effects, as well as the non-significant pathway (in Model 2) from Responses to Harassment to HP Nutrition Behaviours, forces us to the conclusion that behavioural coping responses are not mediating the stress effects of harassment for any of the health outcomes.
Figure 8. Structural Model 3: Testing the Mediating Effects of "Responses to Harassment"

* $p \leq .05$, ns = non-significant at $p > .05$. 
Structural Model 3 demonstrated a good overall fit to the data, with $\chi^2 (190) = 209.42$, $p = .159$, RMSEA = 0.018, GFI = 0.95, NNFI = 0.99, CFI = 0.99, ECVI = 1.01, and SRMR = 0.041. However, because Structural Model 2 yielded a slightly smaller RMSEA (0.006) and a lower chi-square/df ratio ($230.22/228 = 1.01$, compared with $209.42/190 = 1.10$), and because it is of greater theoretical interest, Model 2 was retained as the final model with no further modifications.

**The Direct and Indirect Effects in Structural Model #2**

An examination of the total and indirect effects of each of the three exogenous latent variables on the six endogenous variables, and the squared multiple correlations for each of the structural equations helps to clarify the relationships shown in the model. Direct effects are portrayed in the model by straight lines leading from one latent variable to another, whereas indirect effects are those that pass through at least one other variable before affecting the variable of interest. Thus, an exogenous variable may have "causal" effects in the absence of any direct effects on the outcome variable (Maruyama, 1998).

The results in Table 23 indicate that approximately 50% of the variance in Depression and Physical Health Effects, and 30% of the variance in HP Nutrition Behaviours, is explained by the three stressors in combination with the effects of the other endogenous variables. For each of these outcome variables, the combined total effects of Gender Harassment and Sexual Harassment are roughly equivalent to that of School Stressors. The variance in Self-Worth ($R^2 = .10$) and Health-Risk Behaviours ($R^2 = .16$) is less well explained by the structural equations, although for the latter, it is Sexual Harassment that accounts for the largest direct and total effects. Sexual Harassment also accounts for some indirect effects that accrue to the other health
Table 23
Decomposition of Effects from Structural Model 2

<table>
<thead>
<tr>
<th></th>
<th>Direct Effects&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Indirect Effects&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Total Effects&lt;sup&gt;b&lt;/sup&gt;</th>
<th>$R^2$</th>
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<tr>
<td></td>
<td>Gammas</td>
<td>T-Values*</td>
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<td>.06</td>
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<td>-3.68*</td>
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<td>.10</td>
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<td></td>
<td></td>
<td>.30</td>
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<tr>
<td>Gender Harassment</td>
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<td>School Stressors</td>
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<td>0.10</td>
<td>-.13</td>
<td>-.12</td>
</tr>
</tbody>
</table>

Note.
<sup>a</sup> Completely standardized Gamma values, * $p \leq .05$.
<sup>b</sup> Standardized values.
$R^2$ = Squared Multiple Correlations for Endogenous Latent Variables
outcome variables. All statistically significant direct paths from the stressor variables and all total effects (except for the effect of Sexual Harassment on Self-Worth, which is almost negligible at 0.06), were in the predicted direction. Thus, as the frequency and/or appraisal of harassment or school-related stress increases, perceptions of self-worth decrease, mental and physical health worsens, and health-related behaviours are negatively affected.

Although the data did not support the hypothesis that Responses to Harassment mediates the relationship between harassment and the various health outcomes, the behavioural coping variable was found to be significantly and positively related to Sexual Harassment ($\gamma = 0.39$, $t = 3.80$), and there were some indirect effects operating to suppress the harmful effects of Sexual Harassment on Health-Risk Behaviours. Similar suppressive effects were observed for Gender Harassment and Self-Worth, in that there were indirect effects which (very slightly) reduced the negative, direct effects of Gender Harassment. Conversely, there were indirect effects from Gender Harassment which increased its detrimental effects on Depression. Such an additive, indirect effect is consistent with the path coefficients found for Gender Harassment to Self-Worth to Depression.

In accordance with stress and coping theory, I had hypothesized that increased behavioural coping would have a suppressive mediating effect on the detrimental health outcomes of sexual harassment. This would have required that there be direct, inverse relationships between Responses to Harassment and the variables representing poor health outcomes (i.e., depression, physical health effects, and health-risk behaviours); and direct, positive relationships with the variables representing beneficial health outcomes (self-worth and health-promoting behaviours). However, none of these direct effects were supported by the data. The three paths from Responses to Harassment to Self-Worth, Health-Risk Behaviours, and HP
Nutrition Behaviours were in the expected direction, but failed to attain statistical significance. The other two paths, to Depression and Physical Health Effects, were statistically significant, but were not in the expected direction.

To summarize, the overall fit of Structural Model 2 was excellent, and all statistically significant direct paths from three stressor variables, and all total effects, were in the predicted direction. More frequent and/or more upsetting experiences of stress were associated with poorer health outcomes. However, some of the structural equations explained only a small amount of variance, and the hypothesized mediating function of behavioural coping was not supported by the data.
CHAPTER SEVEN – DISCUSSION AND CONCLUSION

The purpose of this study was to enlarge our understanding of the experiences and health effects of school-based peer sexual harassment among adolescents. Although there has recently been increasing research interest in the harassment of adolescent and school-age children (e.g., Berman et al., 2000; Hand & Sanchez, 2000; Lee, Croninger, Linn, & Chen, 1996; McBride, 1998; Murnen & Smolak, 2000), except for the study by McMaster et al. (1998) there has been virtually no rigorous or population-based investigation into the health consequences of sexual harassment in this population.

This study provides a rich description of the sexual harassment experiences of a diverse group of male and female students in grades 9 through 11. The 565 students in the final sample were drawn from 12 schools, in 6 different locations, across 2 provinces. The school settings varied from small town and rural areas to a large metropolitan area. The primary objective of the research was to test a theoretical model of causal relationships between sexual harassment and various health outcomes among adolescent females. Thus, findings from the structural equation modelling procedures are based on the sub-sample of 348 female students, only. I have presented a description of my study methods, with a detailed description of the statistical procedures that led to the final model in chapter six, and the statistical findings. In this final chapter, I assess the strengths and limitations of my research, discuss the major findings related to adolescents' experiences of sexual harassment, and comment on the implications of those findings for school health programs, focusing on the contribution of nurses to these programs. Directions for further sexual harassment research are identified.
Contribution of the Study and Critique of Conceptual and Methodological Issues

The present study contributes to sexual harassment research in three major ways. First, this appears to be the first integrative study of the process of harassment experiences in adolescence because it addresses the three key aspects of the stress and coping process: level of the stressor (frequency), appraisal, and coping. To date, only Fineran and Bennett (1999) have measured the adolescent's appraisal of the various sexual harassment behaviours experienced. The AAUW (1993) survey included one item that asked how upset the student was right after being harassed, but this global appraisal measure referred to any and all forms of sexual harassment that had been experienced – from being told sexual jokes right up to the more severe forms of harassment such as forced sexual activity. The AAUW survey also asked for an appraisal of the various sexual harassment behaviours, but it was an ‘anticipatory appraisal’ that pertained to a hypothetical situation: “how upset you would be if someone related to your school life such as students, teachers, other school employees or anyone else did the following things to you, when you did not want them to” (p. 4). Nonetheless, in a secondary analysis of the AAUW data, Lee et al. (1996) used this data to construct a measure of severity of harassment experiences. A further complication of the AAUW measure of appraisal is that it refers to harassment that may be perpetrated by either another student or a school staff member, without any validation of their equivalence.

As far as I am aware, this is the first study to examine the influence of coping on the outcomes of harassment among adolescents; moreover, it appears to be the most rigorous investigation of adolescents' ways of coping with sexual harassment to date, through its incorporation of the Coping with Harassment Questionnaire (Fitzgerald, 1996). None of the other surveys cited above included a coping scale, although there was a section in the AAUW
(1993) study that asked about changes in the student's behaviour as a result of the harassment, and some of these items may be considered coping strategies. Indeed, these AAUW items are very similar to certain items in the Coping with Harassment Questionnaire. In the analysis by Lee and colleagues (1996), some of the avoidance behaviours (e.g., drop out of a course, cut a class) were conceptualized as educational outcomes. Other avoidance behaviours in the AAUW survey were categorized by Hand and Sanchez (2000) as behavioural outcomes (e.g., change the way you come to or go home from school, stop attending a particular activity) along with items which might more appropriately be considered somatic outcomes (e.g., lose your appetite, have trouble sleeping). Integrative models are also a fairly recent addition to workplace harassment research, pioneered largely by Fitzgerald and colleagues (e.g., Fitzgerald, Drasgow et al., 1997; Munson, Liberty, Hulin, & Drasgow, 2000; Schneider & Swan, 1997; Swan, 1996), although not all of these studies included coping in their model of the harassment process.

Much of the early research on the effects of workplace sexual harassment was compromised by research methods that asked women who identified themselves as sexual harassment victims to describe the effects of those harassment experiences, thus confounding the measurement of the dependent and independent variables. For example, women who perceived themselves as having been severely harassed may have been more likely to ascribe their later health conditions to that harassment than would women who tried to normalize their harassment experiences or make excuses for the perpetrator. Such procedures do not allow for a comparison of health status between harassed and nonharassed women. Although such methods have been soundly criticized (Fitzgerald, Drasgow et al., 1997; O'Donohue, Downs & Yeater, 1998), except for the study by McMaster et al. (1998), a similar approach has been followed in the harassment research with children and adolescents (e.g., AAUW, 1993; OSSTF, 1995).
Thus, a second strength of this study is that the analysis of health effects is population-based; health effects were ascertained through a cross-sectional analysis of the harassment experiences and health indicators of all respondents whether or not they labelled themselves as having been sexually harassed.

Much of the sexual harassment outcomes research to date, among both adult and adolescent populations, has either been narrowly focussed on a single health outcome (i.e., mental health, e.g., McMaster et al. 1998; Munson et al., 2000; Swan, 1996) or else has lacked well constructed outcome measures (e.g., AAUW, 1993). Thus, a third strength of the present study is its broad conceptualization of health, with measures including physical health (somatic complaints), psychological health (self-worth and depression), and health-related behaviours, both health-promoting and health-compromising behaviours. Lyon and Rice (2000) have noted that, despite nursing’s concern with client comfort, there has been a paucity of nursing research investigating the relationships between stress and somatic discomfort. Furthermore, even within the more general stress-health literature, there has been almost no attention directed to the effects of stress on positive health behaviours.

Thus, this study brought a new degree of rigour to the examination of health outcomes of peer sexual harassment among adolescents through its population-based approach, integrated stress and coping model, and broad conceptualization of health outcomes.

Limitations of the Study

This study has a number of limitations. The principle limitation stems from the correlational design in which all variables were measured at a single point in time. Although support was found for many of the hypotheses in the proposed model, correlational designs preclude causal inferences. The structural equation modelling results indicate that many
relationships exist between sexual harassment, coping, and the various measures of health; however, there may be other equivalent models that fit the data equally well. For example, although the model suggests that higher levels of gender harassment lead to diminished feelings of self-worth, it may be that lower self-worth causes a more negative appraisal of harassment experiences. Thus, the temporal or causal order of the relationships may be reversed. Moreover, it is likely that there are some nonrecursive or reciprocal effects between the model variables and that there are other unmeasured variables that are affecting the results of the model (e.g., family stressors). Structural equation modelling can test multiple equations simultaneously and control for measurement error, but it cannot indicate directionality or prove causation.

The second limitation of the study concerns the use of single-source data. That all data were self-reported and obtained through a written questionnaire introduces the possibility of common method variance which could result in either under- or over-reporting. It is also possible that, given their developmental stage, the adolescent respondents were striving to seem in control of their own lives and may, therefore, have had a tendency to under-report being victimized or experiencing psychological distress. Conversely, some of the findings could also be an artificial result of some participants’ tendency to respond in a complaining manner with respect to all measured variables. However, the correlations presented in Tables 13 and 18 lend only modest support for this concern. Furthermore, just as Munson et al. (2000) obtained different response patterns for job satisfaction and psychological outcomes in their investigation of workplace harassment, in this study, the variation in health outcomes demonstrated by the final structural model also contests the notion of response bias and dispositional influences.

Another possible limitation concerns the retrospective design of the study. Although the recall period was much shorter than that of most harassment studies, participants were asked to
report on their harassment experiences, their appraisals, and their use of coping strategies for the prior 2 months. Thus, there may have been some recall error, or participant responses could have been influenced by particular aspects of the situation. For example, one particularly upsetting harassment experience could possibly overshadow other less severe harassment experiences. Conversely, it is also possible that one particularly upsetting experience could sensitize the person to other forms of harassment.

The fourth potential limitation concerns the psychometric properties of some of the measures used in this study. The Adolescent Sexual Harassment Questionnaire is a newly developed data collection instrument on which there is limited prior evidence attesting to its validity and reliability, and the School Stressors Scale was developed for the purpose of this study, although items were drawn from other published instruments. The Coping with Harassment Questionnaire (Fitzgerald, 1996) was developed for use with an adult population and, to my knowledge, has not previously been used with an adolescent population. Furthermore, although internal consistency has been tested and found satisfactory, there has been empirical support for both a two-factor and two-dimension structure of the scale (Fitzgerald, 1996; Magley & Fitzgerald, 1996), and the original 50-item scale has now been revised into a two-factor, 20-item scale (unpublished manuscript by Fitzgerald, Gold, Brock, & Gelfand, as cited in Munson et al., 2000).

With respect to the measurement of sexual harassment, it should be noted that although the alpha coefficients indicated satisfactory internal consistency (except for the gender harassment subscale for male students; see Table 3 in Chapter 4), the scale failed to factor well, and the high alpha values may be reflecting the high rate of non-endorsement for many of the items. However, other stress-health researchers have argued that it is inappropriate to calculate
measures of internal consistency for life event stressors, arguing that such events are "properties of the environment" (Aldwin, 1994, p. 59) and assumed to be independent. Scheck et al. (1995) further argue that "comprehensiveness and relevance of life events are more important than internal consistency" (p. 1494). Although I have conceptualized sexual harassment as a microstressor rather than a major life event, it could still be argued that harassment is related as much to external forces in the environment (i.e., the perpetrators and their motivations), as it is to characteristics of the victim. Notwithstanding results of the naturalistic study by Shakeshaft et al. (1995) which found that there were three types of students who were most likely to be harassed, "girls who were viewed by their peers as physically unattractive or who did not dress stylishly, girls who were physically well developed, and boys who did not fit a stereotypic macho male image" (p. 31), the prevalence figures in this and other surveys indicate that the vast majority of students are harassed during their school year. However, Shakeshaft et al.'s study does lend support for the notion that different types of students might be the targets of different harassment behaviours, for different reasons, rather than each student being targeted by a wide range of harassment. Thus, items within the harassment scale, particularly the gender harassment subscale, would not apply equally to all students, and we would not expect the harassment questionnaire to factor cleanly across the full student population for harassment victimization.

Measurement of health-risk and health-promoting behaviours was based on items drawn from various health surveys designed for adult and adolescent populations. Although the particular items have been well tested for validity and reliability, the items are most often not summed into a scale total, nor are psychometric properties reported for the survey as a whole (i.e., the reliability or factor analyses). Furthermore, there has been very little research, and only
limited evidence, supporting the construction of a health-promoting lifestyle factor in 
adolescence (Donovan, Jessor & Costa, 1993; Gillis, 1997). Although there is evidence that 
health-risk behaviours cluster (Donovan & Jessor, 1985; Donovan et al., 1988; Tubman et al., 
1996), there may be less association between health-risk and health-promoting behaviours, or 
among health-promoting behaviours than is found between risk behaviours. Adolescents are in a 
developmental stage that encourages experimentation with a wide range of behaviours, and yet 
their behaviours are also influenced or constrained by their family environment. Thus, there may 
be nutritious meals provided by the family caregiver which contrast with the adolescent’s poor 
sleep habits or sexual risk-taking behaviours. Therefore, the lack of correlation that I found 
between items representing health-promoting behaviours was not entirely surprising, although it 
did limit construction of that latent factor in the modelling process.

The final limitation concerns the generalizability of findings. Although I attempted to 
recruit a diverse group of students by targeting a variety of schools and locations, nonetheless, 
the participants were recruited as a non-probability sample that may not be representative of the 
student population in either province. That the respondents were drawn from entire classes also 
means that sub-sample results cannot be generalized to particular schools. Finally, there may be 
differences between those students who chose to participate in the study and those who did not. 
Such confounding factors may have influenced the descriptive findings of sexual harassment 
experiences or the harassment-health modelling results, although I expect that the former would 
be most impacted. That is, the frequency and type of harassment may vary by class or school 
due to various environmental factors, but if sexual harassment is functioning as a stressor, the 
relationships between the stressor and the health outcomes are expected to hold across the 
adolescent population, after having accounted for appraisal and coping efforts.
The Sexual Harassment Experiences of Adolescents

There were two major sets of findings in this study. The first set comprised a description of the participants’ experiences of sexual harassment. The second pertained to the relationships between sexual harassment and health among adolescent females that were uncovered through structural equation modelling procedures. I begin with a discussion of the former.

Sexual Harassment Victimization

The findings from this study support the notion that peer sexual harassment is a serious problem within our high schools. Sexual harassment was found to be highly prevalent and distressing to many of the students who were targeted. The descriptive results also suggest that the victims are not exclusively female, although females report the harassment to be considerably more upsetting than do the male targets of harassment. There are also other qualitative differences in their harassment experiences which may impact the sequelae of harassment. For example, although sexual advances tend to be cross-gender behaviours, male students are responsible for almost all of the gender harassment.

I found that the vast majority of students had experienced at least one form of unwanted sexual harassment during the prior two months, with the males showing only a slightly lower prevalence rate than females. Although this high prevalence is consistent with other, predominantly American, studies, the present study found even higher prevalence rates (89% and 95% among male and female students, respectively) than the other studies which had much longer reporting periods. Other high school studies have asked about the whole school year (Fineran & Bennett, 1999; OSSTF, 1995; Stein et al., 1993) or the student’s whole school life (AAUW, 1993) and found victimization rates that ranged from 83% to 92% for females, and from 50% to 79% for males. Only McMaster et al.’s (2000) study of elementary and middle
school students in grades six through eight used a shorter reporting period of 6 weeks. There are two plausible reasons for the high prevalence rates despite the short reporting period. First, the harassment scale used in this study sampled more broadly from the domain of gender harassment than the AAUW questionnaire; and second, harassment in some form may simply be a ubiquitous phenomena throughout the high school years. There were, however, some differences in the pattern of harassment, and it seems reasonable that the pattern may vary over time or location, with social norms or other situational factors. Two of the more notable differences between the results of this study and that of the AAUW (1993) study were that, in this study, the likelihood of homophobic name-calling was twice that found in the AAUW study, for both male and female students, whereas the likelihood of being touched or grabbed or being blocked or cornered in a sexual way was considerably less than in the AAUW study.

Gender Differences. The results of my study corroborate the gender differences found in the AAUW survey, but suggest that is important to look beyond the more physically invasive forms of harassment. (Indeed, because the harassment scale in this study was theoretically based and sampled more broadly from the domain of gender harassment than the AAUW questionnaire, the findings herein offer greater insight into the phenomena of gender harassment than provided by other studies of adolescent harassment.) In general, girls were more likely to be the targets of sexual harassment than boys, and they were harassed more frequently than boys. The girls experienced a greater variety of sexual harassment behaviours than boys; however, both gender harassment and sexual advances were included among the most prevalent experiences among male and female students. Overall, unwanted sexual attention (verbal, visual, and physical forms) was directed at girls slightly more often than gender harassment. However, when we examine the frequency of harassment at the individual item level, among
only those girls who were targets of that particular harassment behaviour, we find that three forms of gender harassment (called you lesbian or something similar, put down females in general, called you a name like 'butch' etc., suggesting that you are not feminine enough) occurred more often than any of the sexual advances. This suggests that certain girls may be targeted for high levels of gender harassment, and they are not necessarily the same students who received unwanted sexual advances. McMaster and colleagues (2000) had similarly suggested that “youths who are harassed by same-gender peers are not necessarily the same youths who are harassed by cross-gender peers”.

The girls in the present study appraised all forms of harassment as much more upsetting than did the boys. However, except for harassment that clearly crosses the line into sexual assault (forced you to do something sexual other than hugging or kissing) it was not the sexual advances that were considered to be the most upsetting, but rather, forms of gender harassment. Interestingly, this contradicts the findings by Loredo et al. (1995) who found that high school students judged gender harassment to be the least severe form of sexual harassment; however, as in the AAUW study, the students were assessing a hypothetical situation. In the present study, being the object of sexual rumours, and receiving negative comments or unwelcome or crude compliments about their bodies were appraised as being the second to fourth most harmful forms of harassment. It is theorized that gender harassment serves to enforce traditional gender roles (Shakeshaft et al., 1995). For example, comments about a girl’s physical appearance, whether positive or negative, “can serve to remind girls and women of the need to meet stereotypical standards of beauty” (White, 2000, p. 129), whereas spreading sexual rumours or referring to girls as ‘whores’ or ‘sluts’ conveys the notion of the still pervasive double standard of sexual conduct. This is consistent with Shakeshaft et al.’s findings that girls who were either
unattractive or physically more mature were more likely to be harassed, and explains why such seemingly contradictory comments about the girls’ bodies (negative comments and compliments) were appraised as almost equally upsetting.

Among boys who were the targets of sexual harassment, the most frequent harassment experiences were sexual advances from girls, and the boys reported having their personal space invaded in a sexual way (stood too close or brushed up against you in a sexual way) even more frequently than the girls. However, even though these behaviours were reported to be unwanted, they were not particularly upsetting. It was gender harassment, which was perpetrated predominantly by other boys, that was reported to be the most upsetting form of harassment. Moreover, the only two harassment behaviours that were more pervasive among boys compared with girls were homophobic insults such as being called gay or other names indicating that they are not masculine enough. Again this is congruent with Shakeshaft and colleagues’ (1995) finding that boys who “did not fit a stereotypic macho male image” (p. 31) were more likely to be the targets of peer harassment. Many of the comments received from participants in the present study (in response to the open-ended question inviting them to comment on any of the harassment that they had ever experienced during their school life) supported the quantitative findings. For example, one of the 14-year-old male students in this study commented that, “In grade four a bunch of kids that didn’t like me would not let me use the boys washroom, they would always tell me to go use the girls washroom where I belong. They never forced me in the girls washroom they just wouldn’t let me use the boys”.

**Developmental Trends.** Although it has been suggested that older adolescents in university may experience even higher rates of harassment than youth in high school (Bogart, Simmons, Stein, & Tomaszewski, 1992), there has been very little investigation of the
developmental trends in sexual harassment (Murnen & Smolak, 2000). Because the AAUW (1993) survey asked about sexual harassment experiences during the respondent's whole school life, there was no incidence data generated by grade. Fineran and Bennett (1999) queried students in grades 9 through 12 about their sexual harassment experiences during the 1995 school year, but did not report grade-specific rates. The only developmental analysis that I was able to locate was the study by McMaster et al. (2000) which explored the sexual harassment experiences of young adolescents in grades 6 through 8. On the basis of their confirmatory factor analyses of harassment victimization and perpetration, McMaster and colleagues argue that cross-gender and same-gender harassment are "at least partially distinct phenomena" that should be studied separately, particularly as the patterns of victimization and perpetration may vary with adolescent development. This hypothesis was supported by their findings that the incidence of cross-gender harassment victimization and perpetration (during the prior 6 weeks) increased with grade among both male and female students. This statistically significant linear trend did not hold for same-gender harassment, although same-gender harassment victimization rates did increase with grade level among boys. McMaster et al. explain the rise in cross-gender harassment in terms of the young adolescents' pubertal development and greater involvement in mixed gender social networks. Still, given that the McMaster study focussed on the transitional period as youth are entering into adolescence, we cannot generalize from these findings to the remaining adolescent years, nor does the study explicitly address the different forms of harassment (i.e., gender harassment versus harassment of a more sexualized nature).

In the present study, I found the highest rates of gender harassment among the youngest, grade 9 students. This relationship held for both males and females and, thus, reflected same-gender harassment for the boys and cross-gender harassment for the girls. Interestingly, during
one of my field experiences with grade 10 and 11 students, the students commented that I would have found far higher rates of harassment if I had surveyed them while they were in grade 9, which was when most of them had transferred into the school. This particular high school was very large and drew its population from several junior high schools, so students generally developed new social networks after entering the school in grade 9. The group of students participating in the data collection generally agreed that they had teased each other much more often, and in a more hurtful manner, until they got to know each other better and develop friendships.

I found no statistically significant grade differences for sexual advances, although, among the boys, those in grade 9 did report the highest level of sexual advances. These cross-gender harassment behaviours could be reflecting girls' earlier pubertal maturation and a sexual interest that is not reciprocated by the boys in their age group. Being followed around or pestered for a date was appraised by boys as the most upsetting form of unwanted sexual advances, although, in general, the boys tended to discount the unpleasant nature of the girls' sexual advances.

When assessing developmental trends, however, there are various situational factors to be considered, such as the grade structure of the schools. Two of the 12 schools surveyed in this study included grades 9 through 12, whereas the other schools offered grades 7 to 9, 8 to 10, 10 to 12, or 11 to 12. It seems plausible that the grade structure would affect the levels and forms of harassment at various ages, as harassment perpetration and/or victimization may occur across grade levels. Therefore what is experienced at one grade level may depend on the age and grade range of all students in the school. For example, grade 9 girls in a school with grades 9 through 12 might experience higher levels of sexual advances than grade 9 girls in a school with grades
7 through 9 because of increased encounters with older, more sexually mature males.

**Appraisal of Sexual Harassment Experiences**

The boys in this study reported experiencing cross-gender sexual advances more often than they experienced gender harassment, but they appraised the same-gender, gender harassment as being more upsetting than the sexual advances received from girls. In contrast, the harassment that girls experienced (sexual advances and gender harassment) was almost always cross-gender harassment. Like the boys, the girls found gender harassment to be more upsetting than the sexual advances, but they appraised all forms of harassment as more upsetting than did the boys. This gender difference in perceptions is consistent with that found in other high school and elementary-age studies (e.g., Trigg & Wittenstrom, 1996; Murnen & Smolak, 2000) and may occur because girls are threatened by the very real possibility of escalating violence (Larkin, 1994) or because boys are socialized by their families and schools to be more accepting of all forms of aggressive behaviours and games of dominance (Hand & Sanchez, 2000). Boys are also far less likely than girls to feel shame about their sexuality (McMaster et al., 2000). However, the explanation may be more broad based than that, for other researchers have found that adolescent females tend to suffer more than adolescent males from all kinds of social stressors (Seiffge-Krenke, 1995), and Gilligan (1982) has suggested that women’s identity and self-assessments are highly dependent on their relationships, whereas men’s self-assessments are less fused to their relationships.

Despite the gender differences in appraisal that were consistent with expectations and previous research, on average, the students’ appraisals of harassment were fairly low. The most upsetting harassment experience for girls was reported to be “moderately upsetting”, and the four next most upsetting behaviours were reported to be, on average, only “somewhat
upsetting". Lazarus (1999) contends that while some of our appraisals are "deliberate and largely conscious" (p. 82), many more result from unconscious processes. Of the unconscious appraisals, some "can be made conscious fairly easily by drawing attention to the relevant situation" whereas others that have resulted from ego-defense processes are "more difficult to make conscious because of the strong motivation not to confront them" (p. 83). Thus, appraising the incident as a minimal threat may be used as a means of coping with sexual harassment either consciously (I told myself it wasn't really important) or unconsciously.

A measure of social desirability was included in the present study but was not found to be more than weakly associated with reports of sexual harassment or health outcomes. However, the measure of social desirability used in this study may not be relevant to the issue of sexual harassment. Other qualitative sexual harassment research has demonstrated that adolescents deliberately discount sexual harassment behaviours as being mere teasing that should not be taken too seriously (e.g., Berman et al., 2000; Larkin, 1994; McBride, 1998) and similar evidence was found in this study. For example, one Grade 9 girl in the present study reported that being called lesbian by other girls was "somewhat upsetting", but then she added the following comment on the questionnaire: "They were joking, but sometimes I take things seriously". Students learn that they are not supposed to take such peer behaviours seriously; they apparently learn to excuse the harasser and to blame themselves for their feelings. Adolescent girls in particular, may be striving to appear in control of their lives and might, therefore, be reluctant to admit to adult researchers that events within their social networks are unacceptable or distressing to them. It is possible that the recent conservative backlash against feminism may encourage students to minimize their emotional reactions (Hand & Sanchez, 2000), or conversely, the same reaction could also be an unfortunate result of the success of feminism.
Girls who have repeatedly heard that females should be strong and in control may find it even more difficult to admit that they have been victimized by a male. Additionally, students’ current emotional state may influence their memories. Although the notion of false consciousness has been critiqued as a paternalistic perspective, I believe that the possibility of distorted self-reports is an issue that merits attention in sexual harassment research, or when investigating any stressful event where a common coping reaction may be to minimize the event. Lazarus (1999) has suggested the use of “multiple levels of data” in response to the need for “evidence to confirm one or another interpretation” (p. 84).

A final consideration with respect to appraisal is the self-labelling of harassment experiences. There is evidence that both adults and adolescents are disinclined to recognize and label the behaviours of their peers as sexual harassment (Fitzgerald, 1990; Halson, 1989; Jones, 1985; Larkin, 1994; Stein, 1993; Trigg & Wittenstrom, 1996). For example, Loredo et al. (1995) found that students judged less severe forms of harassment by teachers as being much more inappropriate than the same type of harassment by their peers. In this study, very few students who reported being the target of at least one harassment behaviour during the prior two months identified themselves as having been “sexually harassed”. Surprisingly, however, the correlation between self-labelling and the frequency of harassment experiences was greater for gender harassment behaviours than for sexual advances, among both male and female students. It has also been found that older adolescents in university are less inclined to label those behaviours that occur most often as “sexual harassment” (Stockdale & Vaux, 1993). It seems that behaviours which are most commonplace and tolerated by others as natural expressions of masculinity or adolescent behaviour become normalized and accepted as an inevitable part of everyday life.
Coping With Sexual Harassment

When adult women are asked how they would respond to sexual harassment, most report that they would tell the person to stop (Knapp, Faley, Ekeberg, & DuBois, 1997). Moreover, public opinion generally holds that women should respond assertively to unwanted sexual harassment behaviours, letting the perpetrator know that the behaviour is not welcome (Gutek & Koss, 1993) and reporting the incident to some organizational authority if the behaviour does not cease (Fitzgerald, Swan & Fischer, 1995). Human resource managers similarly recommend that victims of workplace harassment take direct action (Stockdale, 1998). However, when women actually experience harassment, they generally ignore the harassment or avoid the harasser; their initial attempts to manage the situation rarely involve direct, assertive action (Fitzgerald, Swan, & Fischer, 1995; Gruber & Smith, 1995; Gutek & Koss, 1993). Thus, it was not surprising that, in the present study, denial (I told myself to forget the whole thing) was the most prevalent coping response used by well over half of both male and female targets of harassment. The next most prevalent response was social support among females, and relabelling among males. The latter is particularly interesting as it was the only coping strategy reported by more males than females, although the difference did not reach statistical significance. The finding that males interpret sexual harassment experiences as flattering (even though unwanted) is consistent with the results of other studies among high school (Trigg & Wittenstrom, 1996) and elementary school students (Murnen & Smolak, 2000), but raises the question about whether such experiences should really be considered sexual harassment.

Significantly more females than males used social support in response to sexual harassment and they used the response more frequently than any other coping strategy. This probably reflects the relatively greater importance of relationships among women and girls
One of the grade 9 female participants in this study reported, "A guy tried to go up my shirt when I didn't want him to, he cornered me – I didn't tell anyone though, except my best friend, who was there for me 100%. It had also happened to her so she knew I felt really bad." Boys may also display less help-seeking behaviour in general, because to ask for help would be considered unmasculine, and to admit being bothered by a sex-related experience with a female would indicate a lack of control over the situation.

There were other notable gender differences in coping. For example, although both male and female students reported using multiple forms of coping, females reported the greater variety of responses. Except for relabelling, a higher proportion of female than male targets used each form of coping. These findings are consistent with studies on workplace harassment and studies on other stressors among adolescents. For example, Stockdale (1998) found that passive responses were used more frequently than active, confrontive responses among both male and female targets of workplace harassment, with more women than men tending to use each form of response. Passivity in coping, however, is not specific to sexual harassment. Seiffge-Krenke's (1995) study of stress and coping among adolescents found that passive coping was much more common than active coping, despite the adolescents' predictions that they would respond actively. Seiffge-Krenke also found that females reported higher use of all forms of coping.

There is evidence that the choice of, and efficacy of, coping strategies are dependent on individual and situational factors, whether we are concerned with sexual harassment or more broadly defined psychosocial stressors. Among sexual harassment researchers, there is a growing consensus that the most direct and assertive coping responses tend to be reserved for the more severe harassment experiences (Gruber & Smith, 1995; Knapp et al., 1997; Munson et al., 2000; Stockdale, 1998), although progression of the harassment is undoubtedly an important
determinant, particularly as most harassment tends not to occur as a one-time incident (Gutek & Koss, 1993). Knapp et al. (1997) maintains that “most targets tend to employ a sequence of coping responses in their efforts to end unwanted sexual attention” (p. 693) moving towards more assertive and more perpetrator-focused responses over time. Although this seems a reasonable hypothesis, Thacker’s (1996) study of responses to workplace harassment indicated that, when the harassment continued over a long period of time, women became less likely to use assertive strategies and more likely to use passive strategies such as avoidance and acceptance (i.e., the targets seemed to ‘give up’ trying to restore their control over the situation). Although Thacker’s study did not address severity directly, the study did examine, but failed to find any relationship between the type of harassment (quid pro quo vs. hostile environment) and the type of coping response. The present study asked about participants’ responses to all the harassment that they had experienced during the prior two months, rather than asking about how a student coped with a particular harassment experience (as has been done in some of the other harassment studies, e.g., Gruber & Smith, 1995). Thus, the approach used in this study does limit the interpretation we can bring to the examination of coping.

Coping responses may be influenced or constrained by the social norms of the environment (Lazarus, 1999; Seiffge-Krenke, 1995). Lazarus noted that the “need to censor certain actions even though they would otherwise be personally useful .... [may] interfere with the coping process” (p. 63), and increase the overall experience of stress. One 14-year-old female student in the present study reported, “When I was in grade 8 this guy cornered me against a wall and was touching me ... when I told him to stop I had to use phisical [sic] force to get him off of me. Then I got in trouble .. the male teacher didnt [sic] believe me”. The results of other studies (e.g., Berman et al., 2000; Stein et al., 1993) suggest that it is not
uncommon for girls to be given a detention or otherwise ‘get in trouble’ for fighting back against such physically invasive forms of harassment such as having their breasts or bums pinched, or having boys look down their shirts. Given the sexist, gendered order of our society which continues to accept and promote male aggression and dominance (Hand & Sanchez, 2000), and to hold females responsible for managing social interactions, it does not seem surprising that school personnel may react more negatively to the girls’ aggressive responses than to the boys’ harassing behaviours. The consequences of this response by schools, however, may be to discourage all forms of assertive responses by the girls. Although the male students also reported a predominance of passive responses, this may simply be reflective of their lower appraisals of threat. It could also indicate that most people in our society – males and females – are ill prepared for dealing with inappropriate sexual situations.

Results of this study indicate that formal and informal complaints to the school were the least commonly used responses to harassment, with no statistically significant differences by gender. Although the relative infrequency of this response may suggest that complaints are being reserved for more serious harassment or as an option if less direct coping responses prove to be ineffective, there are two other plausible explanations: (1) the target may fear that the harassment will escalate as retaliation (Knapp et al., 1997), especially if the student is viewed as ‘not being able to take a joke’, and (2) the student may not anticipate a positive response from the school (Berman et al., 2000; Larkin, 1994). Indeed, one comment by a 16-year-old female participant in the present study suggests that complaints are not always made, even when the incident reaches the level of legally defined sexual assault, “I was raped by one of my close guy friends this summer. He was drunk so I tried to make myself forget about it. I told 2 of my best friends and they weren’t very understanding. I’ve been trying to forget everything but it’s hard
when I see him everyday at school. I’m not going to take it any further. I haven’t told any adults. I’m too scared to.”

Researchers of workplace harassment suggest that the organizational context is an important determinant of the coping strategies employed. “Filing a formal report may be useless or worse in an organization ignorant or tolerant of sexual harassment” (Magley & Fitzgerald, 1996, p. 5; see also Gutek & Koss, 1993). On average, the participants in this study held fairly neutral views about their school’s tolerance for sexual harassment, with no significant differences by grade or gender, a finding that is notably inconsistent with the results of other qualitative and quantitative studies, including Berman et al.’s (2000) Ontario-based study of girls aged 11 to 16 years. However, one grade 9 girl in the present study did comment that, “all around us people are being harassed and teachers don’t even notice. It’s like they take notice when you don’t want them to, and they never take notice when you do want them to. I’m being harassed by one boy everyday, and the teacher never does anything”. In the Seventeen study (Stein et al., 1993), 45% of the respondents who reported making a complaint about being harassed stated that the harasser had not been subjected to any discipline. Many of the girls in the Seventeen study also described being told that “they deserved it” because of the way they dressed, or acted, or were told that it was the boys’ way of flirting, thus suggesting that they were overreacting to the incident. Although some of the schools’ response may be a reflection of the sexism in our society, it may also be that in many cases, teachers are uncomfortable with the way the school environment has become more violent and more sexualized, and yet lack the skills to respond effectively; hence harassment is routinely ignored or trivialized.

Comments from the participants in the present study indicate that reporting the harassment behaviours of their peers yielded various outcomes. For example, one girl in grade
11 reported, "A guy was cutting [sic] out pictures and writing sexual stuff on the picture and gave it to me. I told a teacher and the student had to leave the school and never came back. He wasn't allowed to come near me". Conversely, another grade 10 girl reported, "I used to be harassed by a guy on my bus, and it took quite awhile for me to tell anyone but I talked to the principal and it still didn't stop. Then I just ignored him, and he left me alone."

In sum, the students in this study reported using a variety of coping responses to sexual harassment from peers, with denial being the most common coping response for both girls and boys. Girls employed a greater variety of coping strategies than did boys, with girls being far more likely to share their experience with a friend. Boys were more likely to relabel their experience. Passive responses were found to be the predominant coping strategy for both sexes, and it was speculated that females might not actively confront the harasser or actively seek help from school staff because of fears of making the situation worse or of not being believed or taken seriously by staff.

The Health Consequences of Sexual Harassment

This study tested a theoretical model of causal relationships between school-based peer sexual harassment (and other school-related microstressors) and psychological, physical, and behavioural health outcomes among adolescent females. Two questions underlying the theoretical model that was tested were: (1) what are the health consequences of exposure to sexual harassment from peers? and (2) are the health effects of sexual harassment among adolescent women mediated by their behavioural responses to the perpetrator of the harassment? Three models were compared through structural equation modelling analyses: the first model included only indirect, mediated paths from the two harassment variables through coping to the five health outcome variables; the second model included a combination of direct and indirect
paths; and the third model contained direct paths only. The latter served to test the mediational role of behavioural coping responses. The second model was found to offer the best explanation, in terms of overall statistical fit, for the relationships demonstrated by the data, and accounted for the greatest amount of variation in the various health outcome measures.

It was found that the combination of stressors accounted for a moderate amount of the variance in the young women’s reports of depression, physical health effects, and their nutritional behaviours, with sexual harassment accounting for a considerable amount of the variance over and above that associated with other school-related stressors. Thus, the overall results support the hypothesis that sexual harassment, as a microstressor, contributes to poor health outcomes. However, there was no support for the hypothesis that behavioural coping responses to sexual harassment reduce or mediate its harmful effects.

There were some constraints to the modelling procedures due to characteristics of the data. For example, because of the multicollinearity between frequency and appraisal, it became necessary to use a composite variable (frequency by appraisal) for each of the stressor indicators. Therefore, it was not possible to differentiate the effects of harassment frequency from harassment appraisal, or to test the mediational effects of appraisal. The non-normality of the data also limited which manifest variables could be used as indicators, and as discussed in Chapter 6, the single indicator for gender harassment is not one that I consider to be strongly representative of the construct as originally conceptualized. Indeed, Munson et al. (2000) chose to dichotomize sexual harassment into the categories of “harassed” and “not harassed” (e.g., Munson et al., 2000) when faced with a similar skewness to frequency data, but this does not seem to be a common approach in structural equation modelling.
The recursive nature of the models tested also limits our potential understanding of the relationships inherent in the data. It is recognized that a complete model of the stress and coping process would incorporate reciprocal causation (e.g., with bi-directional pathways between appraisal and coping, or between depression and appraisal). However, the causal ordering of latent variables in the models represents the primary focus of concern among researchers investigating the outcomes of sexual harassment, and as a result, the method adopted in the present study is a reasonable way to approach this complex problem.

The Health Effects of Sexual Harassment

Based on a review of the literature in the fields of sexual harassment, sexual assault, and stress and coping, it was predicted that young women who reported more frequent and more upsetting sexual harassment would score significantly higher on measures of depression, health-risk behaviours, and physical health complaints, and score significantly lower on self-worth and health-promoting behaviours. Model 2 was ultimately judged to provide the best representation of the data, and although not all specified paths were found to contribute significantly to the model as predicted, all significant direct paths from the three stressors to the five health outcomes and all total effects were in the predicted direction.

The findings indicate that roughly half the amount of variation in depression and somatic complaints (e.g., headaches, general fatigue, muscle aches and pains, and stomach upsets), and a third of the variation in nutrition behaviours can be attributed to the combination of stressors, with gender/sexual harassment and other school-based stressors accounting for roughly equivalent proportions of the total effects. Health-risk behaviours were less well explained, but the effects were solely attributable to gender and sexual harassment. The association between depression (whether defined as depressed mood, depressive syndromes, or depressive disorders)
and psychosocial stressors has been fairly well established within the adolescent population (Compas et al., 1993; Seiffge-Krenke, 1995), with the correlation for microstressors generally being somewhat higher than for major stressful events (e.g., Wagner et al., 1988). There is also evidence linking stress in adolescents with somatic complaints (e.g., Wu & Lam, 1993), perceived health status (e.g., De Maio-Esteves, 1988), and health-risk behaviours (e.g., Byrne et al., 1995; Wills & Filer, 1996), although there has been very little investigation into the effects of stress on healthProtective behaviours. The findings in this study are also consistent with the evidence emerging from workplace harassment research. For example, Fitzgerald, Drasgow et al. (1997) found that sexual harassment was directly related to mental health problems and indirectly related to physical health problems. That sexual harassment explained poor health outcomes above and beyond the effects of other school-based stressors supports the notion that sexual harassment functions as a stressor and a social determinant of health among adolescent females. Moreover, the results of this study are particularly important given the previous neglect of population-based research into the health effects of sexual harassment among adolescents.

**Duration of Stress Effects.** One of the challenges in designing this study was to determine the appropriate time interval for measurement of the various predictor and outcome variables. I wanted to facilitate accurate recall but obtain sufficient variability in responses to permit testing of relationships, and yet it was also important to use a time span that could reasonably explain a link between the stressors and the health outcomes. The latter requires that the time interval be long enough to allow the health outcome to emerge but short enough to capture the effect before it expires (Werner & Frost, 2000). Although there is considerable evidence to suggest that 6 to 12 months is an appropriate length of time for investigating the physical and psychological health effects of major, acute stressors (Thoits, 1995; Werner &
Frost), and some studies on sexual harassment in the workplace have found significant
time relationships up to 2 years after the event (e.g., Fitzgerald, Drasgow et al., 1997), there is much
less certainty about the duration of stress effects for more minor events.

I had conceptualized sexual harassment as a minor stressor and, therefore, did not expect
to find long-lasting effects unless there had been a substantial build-up of stress. Thus, I limited
recall of sexual harassment experiences and all health outcomes, except for depression, to the
prior two months. Depression was measured only for the prior week, according to the CES-D
protocol (Radloff, 1977). A two-month recall period is considerably shorter than that used in
most other sexual harassment studies, but it is longer than that used in other investigations of
minor events and daily stressors. For example, Seiffge-Krenke’s (1995) program of research
limited the recall period for minor stressors in adolescence to the previous two weeks.
Furthermore, in a study of 439 pre-adolescent children aged 10 and 11 years, Hilsman and
Garber (1995) found that the depressive effects of receiving poor grades dissipated within 5
days. Thus, the finding in the present study that sexual harassment results in health effects for
female adolescents is a conservative one because there may have been other short-term health
effects of the young women’s sexual harassment experiences that were not captured in this
study.

The Mediational Effects of Coping

Although the overall results of Model 2 support the hypothesis that sexual harassment
contributes to poor health outcomes, there was no support for the hypothesis that behavioural
coping responses to sexual harassment mediate its harmful effects. Nor was coping found to be
related in any direct way to a reduction in negative health outcomes. More frequent and more
upsetting sexual advances were associated with greater use of behavioural coping responses, but
gender harassment in the form of derogatory comments about females was not found to be associated with coping. Although the latter was one of the most prevalent forms of harassment, it was not a particularly upsetting experience for either the male or female students. Thus, it is not surprising that this particular experience did not evoke behavioural coping responses.

Coping efforts were not found to be significantly related to self-worth, health-risk behaviours, or health-promoting nutrition behaviours; and contrary to expectations, the young women who reported avoiding or confronting the perpetrator more frequently also reported higher levels of depression and more frequent somatic complaints.

To summarize then, depression and somatic complaints were largely explained by the young women's sexual harassment experiences, but neither avoiding nor confronting the harasser served to reduce the depression or physical health effects. Young women who received more sexual harassment also tended to engage in more frequent health-risk behaviours such as smoking and drinking, although the results suggest that this tendency may be reduced through behavioural responses to the perpetrator (the direct pathway between coping and health-risk behaviours was non-significant, but in the expected direction). Thus, consistent with other research findings (Byrne et al., 1995; Wills & Filer, 1996), the adolescent women may be using tobacco and alcohol as alternative strategies for coping with the stress of sexual harassment. The results of this study also indicate that a good deal of the effects of sexual harassment and other school-based stressors tend to occur indirectly. For example, the increased depression appears to contribute to more frequent smoking and drinking, higher levels of somatic complaints, and lower levels of health-promoting nutrition behaviours.

Although there has been increasing interest in the effects of various coping strategies on the experiences of sexual harassment, this area of research is still in a very nascent stage and, to
date, there has been little consistency in research approach or results (Munson et al., 2000). It is suggested in the stress and coping literature that there are no universally effective coping responses to psychosocial stressors. Lazarus (1999) concluded that, “efficacy depends on the type of person, the type of threat, the stage of the stressful encounter, and the outcome modality—that is, subjective well-being, social functioning, or somatic health” (p. 111). Indeed, Schneider and Swan (1994) found that effectiveness of various coping strategies varied with the level of sexual harassment experienced within the workplace. For example, at high levels of harassment, the best job outcomes and mental health outcomes were associated with high levels of external or problem-focused coping and low levels of internal or emotion-focused coping. At lower levels of harassment, better outcomes were associated with less use of both these forms of coping. As in the present study, Schneider and Swan’s definition of external coping included avoidance and confrontation of the perpetrator.

Swan (1996) later investigated the differential effects of indirect forms of external coping (avoidance and appeasement of the perpetrator) and direct forms (confrontation and filing a complaint). Although she concluded that greater use of direct coping led to better psychological health, whereas greater use of indirect coping led to worse health outcomes, the analyses in that study did not fully assess the mediational role of coping by comparing the direct pathways between sexual harassment and the health outcome measures with and without the inclusion of coping. In the present study, avoidance and confrontation were combined into one latent variable to represent behavioural coping. Although this could potentially be seen as problematic, there was a high correlation between the two forms of coping and no differences were noted in their bivariate relationships with the various health outcomes. This is not particularly surprising given that, on average, people tend to use the full range of coping.
strategies in response to psychosocial stressors, although there may be a progression to their use (Gutek & Koss, 1993; Knapp et al., 1997; Lazarus, 1999).

The efficacy of behavioural coping may also vary according to the particular outcome of interest (Lazarus, 1999). Knapp et al.'s (1997) review of the literature suggests that confrontation of the harasser may be effective at ending the harassment but may result in increased distress for the target, particularly if unsupported by others. Clearly then, it is important that we consider a full range of outcomes (i.e., cessation of harassment, educational effects, and social and health effects), as well as long- and short-term consequences, when assessing the effectiveness of adolescents' responses to harassment. For example, avoidance or emotion-focussed coping such as denial may be effective in the short term, or for harassment that occurs during a limited time period only (e.g., while on a week-long field trip), but not for harassment that continues throughout the whole school year. There are also many other forms of coping that were not included in the model which might mediate sexual harassment in either the short or long term. For example, social support may eventually lead to improved long-term solutions if the victim of harassment obtains the support she needs to engage in other problem-solving coping strategies (Lazarus, 1999).

Implications for School Health Programs and Other Preventive Interventions

The findings from this study have important theoretical and practical implications for educators and health care practitioners involved in school health programs. The relationships between sexual harassment and poor health outcomes that were uncovered in this study substantiate the importance of primary, secondary, and tertiary prevention of peer sexual harassment within the school environment. Moreover, the previous lack of attention to this issue within the nursing literature suggests that it is important that nurses increase their awareness
about peer sexual harassment as a stressor with potentially harmful sequelae among adolescents. In addition, nurses need to understand that they are positioned to make a unique contribution to the amelioration of the problem of peer harassment in the schools.

The higher rates of harassment evident among grade 9 students, coupled with other empirical evidence that sexual harassment begins in earlier grades, suggests that prevention efforts need to be instituted well before the high school years. The high incidence of gender harassment and its negative appraisal by students suggests that gender harassment should not be excluded from sexual harassment definitions and policies, and that sexual harassment prevention should be included as part of more general anti-bullying interventions (McMaster et al., 1997). Preventive efforts may be furthered if we conceptualize the gender-related derogatory comments, teasing about promiscuity, vulgar comments or insults about each others bodies, and inappropriate sexual advances as just part of an escalating climate of decreased empathy, interpersonal disrespect, bullying, and violence in schools (Hand & Sanchez, 2000; Johnson & Lennon, 1997). Moreover, because schools are reproducing larger societal conditions, it is important that we consider community-based and larger societal strategies (e.g., lobbying for decreased sexualized violence in the entertainment industry) in addition to school-focussed interventions.

Knowledge of the links between sexual harassment and health behaviours may also serve more general health promotion efforts. Health education and health promotion efforts have been criticized for encouraging “victim blaming” through their focus on individual behaviours and lifestyle. However, when causal linkages are demonstrated between psychosocial stressors (some of which arise from social inequities) and health-compromising behaviours, the harmful behaviours become much more of a collective social issue and less a marker of individual
failure. The findings of this study may also assist in prioritizing health problems and interventions directed at youth and may influence intersectoral health promotion efforts.

The Role of Nurses

The public health or school health nurse is ideally situated to bring a population-based perspective to the prevention of sexual harassment and the amelioration of its sequelae among adolescents. A number of recommendations have emerged from the fields of education, social work, and family studies (Fineran & Bennett, 1998; Johnson & Lennon, 1997; Lee et al., 1996; Linn, 1999) that are equally relevant to the role of the nurse. For example, as part of the school health team, nurses can contribute to primary and secondary prevention by advocating for, and participating in the development of sexual harassment policies, procedures for responding to complaints, and the inclusion of sexual harassment as a topic within life skills curricula. Nurses should also advocate for staff education to raise awareness of sexual harassment and skills in responding to harassment situations. Most importantly, because many adults underestimate the influence of daily interpersonal stressors on the lives of adolescents, nurses should educate teachers, other school personnel, and parents about the potential harmful health effects of harassment so that students' behaviours and complaints are taken seriously. We should also work to ensure that sexual harassment, and the larger issue of social environment is considered an important part of comprehensive school health programming.

Nurses have numerous opportunities to interact with adolescents, both in the school and other settings (e.g., sexual health clinics), and we have been taught to routinely consider potential interactions between stress, coping, health, and illness. Thus, nurses have a unique contribution to make at the level of secondary and tertiary prevention. For example, sexual harassment should be considered as a potential stressor when assessing somatic complaints or
depression. Nurses can help high school students become more effective at recognizing situations that are stressful to them and assessing the efficacy of their coping responses. Nurses can also promote healthful ways of coping with stress rather than coping responses that may compromise their health. Also at the tertiary level, nurses can facilitate the development of student support groups and peer counselling programs. Finally, nurses should be alert to the potential for escalating gendered violence, either at the school-community level, or within individual relationships, for it has been theorized that the sexual harassment that is tolerated in schools encourages the future victimization of girls through other sexual assault and dating violence, and promotes continued abusive behaviours in boys (Stein, 1995).

Gender has come to be recognized as a powerful determinant of health, and the findings from this study related to gender harassment and same-gender harassment among male students indicate that gender-related power can be used against both sexes. The results in this study should generate concern over the possibility that boys who are targeted for frequent gender harassment might become future victims of rougher forms of bullying. Thus, the school nurse should not neglect gender harassment as a potential health issue among male students. The nurse should also advocate that the life skills curricula include an exploration of gender construction in addition to discussions of healthy sexuality and relationships, social skills training, and assertiveness skill-building for intimate relationships. Assertiveness training would provide girls and boys with a useful method for coping effectively with peer sexual harassment. Learning assertive response skills should result in increased feelings of self-efficacy and self-confidence which, in turn, should lead to decreased levels of depression and anxiety. Moreover, a more general discussion of gender effects on health should be included as part of health education interventions with individuals, families, and communities. Creating school environments that
are more conducive to health could be greatly facilitated through concomitant changes in our larger community values and practices. Nurses have numerous opportunities to role model and encourage gender equity and empathy-building when working with families with young children, or with school and community groups. By modelling appropriate awareness of the problem of student-on-student gender harassment and sexual harassment and appropriate concern for the student targets, nurses can insure that this health problem is recognized and dealt with in schools and communities.

**Recommendations for Future Research**

Based on the results and limitations of the present study, and review of other sexual harassment and stress literature, the following recommendations are suggested for future investigation into the sexual harassment experiences of adolescents.

*The study should be replicated in other adolescent populations, using a full range of outcome measures.* It is important that future studies be based on integrative models, with an assessment of frequency, appraisal (or other measure of severity), and coping strategies. In particular, more study of the coping process is needed, with consideration of the full range of outcomes (i.e., cessation of harassment, educational impact, social outcomes, and measures of various health outcomes). Thus, future study would ideally be conducted by interdisciplinary research teams with a membership that crosses the fields of education, psychology, and health.

*Additional efforts should be made to examine developmental trends in sexual harassment experiences throughout childhood and adolescence.* Thus, it is important that we have reliable and valid measures of sexual harassment and coping that can be administered across grades (e.g., one instrument with different age-appropriate versions that sample fully across all domains
of sexual harassment).

*Gender harassment should not be overlooked as a potentially harmful stressor.* It is also important to investigate potential differences between same-gender and cross-gender harassment.

The model under study should be expanded to include contextual and individual variables that may influence students' experiences of harassment, their coping responses, and the efficacy of their responses. Measurement of such antecedent variables may help to account for a greater amount of variance in the outcome variables. Valid health outcome measures are also dependent on a number of unresolved temporal issues, such as length of exposure to the stressor, duration of stress effects, and lag time before onset of dysfunction (Aldwin, 1994; Cohen & Williamson, 1991). These issues should be taken into account and, ideally, the intervening period between measurements should also be monitored for confounding factors. Future researchers may also want to consider the use of cluster analysis to determine whether adolescents may be grouped by their sexual harassment experiences or outcomes (i.e., to determine the characteristics of those being targeted with particular types of harassment or experiencing particular outcomes).

There should be longitudinal studies that combine intra-individual analysis with across-subjects analysis. For example, repeated daily data collection would permit tracking of the covariation between daily stressors and health-related outcomes and could account for otherwise uncontrolled individual differences (as in the studies by DeLongis et al., 1988 and Wagner et al., 1988). A daily diary approach could be used to measure sexual harassment and outcomes for one week each month over the school year and would be consistent with the transactional nature of stress and coping as originally conceptualized by Lazarus and Folkman (1984, Macnee &
McCabe, 2000). The intra-individual design would allow the respondent to serve as his or her own control, so that the same person is compared under conditions of stress and non-stress. Analysis could be conducted through hierarchical linear modelling (Bryk & Raudenbush, 1992).

Sexual harassment researchers should also tap other types and sources of data. For example, salivary cortisol levels are increasingly being used as a measure of the stress response in children (Ryan-Wenger, Sharrer & Wynd, 2000) and could be monitored in conjunction with daily diary reports of sexual harassment experiences. Personal or telephone interviews are alternative ways of gathering survey data that might foster more contemplative responses than that obtained through written self-report questionnaires. Direct observation in natural settings combined with individual or focus group interviews could also provide a better understanding of the widely divergent meanings that may be given to the harassing behaviours of peers and the motivation for using various coping strategies.

Conclusion

The present investigation examined the relationships between peer sexual harassment and other school-related stressors with physical and psychological health outcomes and health-related behaviours in a sample of 348 adolescent girls. Male and female high school students in grades 9 through 11, from 12 schools in British Columbia and New Brunswick were questioned about their experiences with peer sexual harassment during the prior two months, and about their health and health-related behaviours. Data from all respondents were used to describe the sexual harassment experiences of this population, although the investigation into the relationships between sexual harassment and health was conducted only for the female respondents.

This study is one of the first population-based investigations into the health
consequences of peer sexual harassment among adolescents. Other investigations into the stress experienced by adolescents have indicated that interpersonal stressors are very salient to adolescents, and other sexual harassment research has suggested that high school students may experience harmful educational and emotional outcomes as a result of their harassment experiences. The present study advances our knowledge by providing more rigorous support for the notion of sexual harassment as important stressor with potentially harmful effects on physical and psychological health and health-related behaviours. The results also support the utility of transactional stress and coping theory as a mid-range theory underpinning nursing practice and research.

Four key conclusions may be drawn from this study:

1. **Sexual harassment is pervasive among both male and female students in grades 9 through 11, but is particularly problematic for adolescent women due to the qualitatively different nature of their harassment experiences.** Female students experience a greater variety of harassment behaviours and more frequent harassment than male students, and they report being more upset by the harassment that they receive.

2. **Both male and female students report that, in general, gender harassment is more upsetting than unwanted sexual advances.** Among the boys, gender harassment is predominantly a same-gender phenomena, whereas among the girls it is predominantly a cross-gender phenomena. Thus, boys are responsible for most of the gender harassment perpetrated within the high school environment, and it is this form of harassment that is most upsetting, whether the student targeted is male or female.

3. **Female students who experience more frequent and more upsetting sexual harassment also experience worse health outcomes.** Sexual harassment explains a good deal of the variance in negative health outcomes over and above the effects of other school-based stressors.

4. **Female students are more likely to avoid or confront the perpetrator as sexual harassment increases in frequency or degree of threat, although these behavioural coping responses do not necessarily mediate or reduce the harmful effects of sexual harassment.**

A substantial relationship between sexual harassment and health outcomes was detected,
although strong effects were not found. However, given our understanding that stress is a complex, transactional process involving situational stressors, subjective appraisal, coping behaviours, and the interplay of other personal resources, combined with our still limited understanding about the mechanisms through which stress affects health (Steptoe, 1991; Thoits, 1995, Witek-Janusek & Mathews, 2000), these moderate relationships are noteworthy. Furthermore, by exploring coping strategies used by adolescents when faced with psychosocial stressors, this study contributes to our understanding of the great complexities involved in this area.

Overall, the population-based findings from this study provide empirical support for the prevailing conclusions in the literature that are more often based on qualitative research or anecdotal accounts. The results support the basic conceptualization of sexual harassment among adolescents as a stressor with physical, psychological, and behavioural health outcomes. And just as Seiffge-Krenke (1995) warned that “we should be very wary about societal and common-sense tendencies to downplay the distress stemming from minor events” (p. 217), the results of this study suggest that we should be equally wary about trivializing the possible consequences of sexual harassment among adolescents, even though adults might perceive them to be mundane experiences.

Perhaps, though, there is a danger in such research, and Gutek and Koss’s (1993) warning that “the failure to exhibit outcomes [could] negate the person’s experience of harassment” (p. 44) remains very salient today. Findings from the present study are intended to be used to sensitize educators and health care personnel to the significance of peer sexual harassment in adolescence. It is certainly not intended that the individual person be required to show evidence of adverse health effects in order to be granted consideration. Effects may be
latent, and even some of the apparently effective coping strategies could have long-term implications. Avoidance of the perpetrator may mean avoiding the person in hallways or the lunchroom, but it could also mean skipping classes, changing course selection, dropping extramural activities – all of which have the potential to impact the student’s educational outcomes, career prospects, and long-term health. Finally, there is the question of social justice, irrespective of immediate outcomes. Nurses such as Lillian Wald and Lavinia Dock took important leadership roles in social justice issues at the turn of the last century, and this is a focus to which nurses have only recently returned. Nurses have the opportunity to enhance wellness in the adolescent population through a better understanding of the experiences and effects of sexual harassment as a microstressor, and through involvement in its prevention. The results of this study suggest that peer sexual harassment among adolescents warrants our attention as a social determinant of health.
REFERENCES


Compas, B. E. (1997, October 16). Letter of protocol regarding the use of the APES. Available from B. E. Compas, Department of Psychology, University of Vermont.


Some Information About Peer Harassment

Some of the questions you were asked in this research study were examples of harassment from peers (other students). Harassment is any kind of behavior that makes someone uncomfortable and interferes with his or her life. Harassment includes a wide range of behaviors, including the following:

- Unwelcome jokes, comments, or teasing about ethnicity, skin colour, abilities, gender, or sexual orientation
- Spreading sexual rumours or writing sexual graffiti about a student
- Making inappropriate sexual references (e.g., telling sexual jokes to students who don’t want to hear them, wearing t-shirts with offensive pictures or messages)
- Bullying
- Physical or sexual assault.

When one student bothers another student by calling them names or making hurtful jokes about their gender, ethnicity, or sexual orientation, that student has committed an act of harassment. Under Canadian and British Columbia human rights legislation harassment is illegal. Harassment is also against the rules in your school.

There are many types of harassment, each of which can have serious emotional consequences. If you would like to talk with anyone about any experiences you may have had that have bothered you, we encourage you to talk with your school counsellors. School counsellors can listen to your experiences and they can help you brainstorm ways of dealing with the problem. They can also explain your options if you decide that your problem is serious enough that it needs to be reported to higher authorities or if you want additional counselling support. If filling out this questionnaire has brought up any feelings of emotional distress, you are encouraged to talk with one of your school counsellors.
CONTENTS

Preface ..............................................................................................................................................v
Acknowledgements .............................................................................................................................vii

Chapter 1. Introduction
  Don't Skip This Section ......................................................................................................................1
  Preparation .........................................................................................................................................1
  Flexibility and Options ......................................................................................................................1
  Some Opening Notes on Teaching Style ............................................................................................1
  Use in Various Classrooms ..............................................................................................................3

Chapter 2. Other Preliminary Notes
  A Selection of Writing Options .........................................................................................................5
  Suggested Teaching Format ...............................................................................................................8
  Topical Cross-Reference of Activities ..............................................................................................11

Chapter 3. Core Lessons
  1. Flirting vs. Sexual Harassment: A Teacher-led Discussion .........................................................12
     Homework: “Crossing the Line” Writing Assignment .................................................................18
  2. Taking A Closer Look: Student Observations .............................................................................20
     Student Handout: “Take a Closer Look, Be an Ethnographer” ..................................................23
  3. Says Who? A Questionnaire and Debriefing ................................................................................24
     Student Handout: “Says Who? A Questionnaire” .......................................................................26
     Teacher Answer Guide ...................................................................................................................27
  4. What Are Your Rights? A Review and Discussion ......................................................................35
     Student Handout: “What is Sexual Harassment?” .....................................................................37
     Student Handout: “What Can I Do? Tips for Students…” ...........................................................38
     Background Teaching Notes: Laws Regarding Sexual Harassment .........................................39
  5. Case Studies and Role Plays: Class Review and Case Presentations .........................................42
     Katy and the Bathroom Wall ..........................................................................................................45
     Boys Who “Meow,” and Then Some, in Class .............................................................................47
     The Playground ..............................................................................................................................48
     The New Boy, Taunted and Targeted ............................................................................................49
     Susan in the Shop ...........................................................................................................................50
     All-Male Varsity Kickline ...............................................................................................................52
     Background Teaching Notes ..........................................................................................................53
     Student Handout: “Get Up, Stand Up…” .....................................................................................56
     Homework: “Taking a Stand,” a personal essay ...........................................................................57
Chapter 4. Supplemental Activities

1. Send a Letter to the Harasser: A Review and Writing Assignment
   
   *Student Handout: “Sample Letter…”*
   *Teaching Notes: Send a Letter to the Harasser*

2. In the News: A Review of Seventeen Press Conference Statements
   
   *Student Handouts: “Statements on Sexual Harassment”*
   *Homework: “In the News” Writing Assignment*

3. Current Events: A Monthly Discussion

4. Straight from the Source: An Interview
   
   *Student Handout: “Straight from the Source”*

5. Cartoons: An Art Activity

6. Respect: A Brainstorm and Discussion
   
   *Homework: “Letter to a Young Friend” Writing Assignment*

Chapter 5. Resources

Bibliography

Organizations Working to Create More Equity in Schools

Appendix: Relevant Readings

- Franklin v. Gwinnett County (GA) Public Schools, 112 S.Ct 1028 (February 26, 1992)
- “Harassment in the Halls,” Seventeen (September 1992)
- “Sexual Harassment in the Boys’ Room,” Choices (January 1993)
- “Harassment at School: The Truth is Out,” Seventeen (May 1993)
- “Stop Sexual Harassment in Schools,” USA Today (May 18, 1993)
- “O.C.R. Urges ‘Forceful’ Reaction to Harassment of Children,” Education Week (May 12, 1993)
- “Sexual Bullies,” The Boston Globe (June 6, 1993)
APPENDIX C
References/Resource List for School Counsellors

Peer Harassment Among Adolescents


questionnaires, debriefing material in the form of educational and referral information will be distributed to the participants.

Recruitment of Participants:
Approximately one week prior to the study, students will be given an information package to take home to their parents/guardians. The package will contain (a) an information letter to the student inviting them to participate, (b) a cover letter to the parent/guardian outlining the purpose and procedures of the study and conditions for informed consent, (c) a parental consent form, and (d) a return envelope. These will be returned to the school and noted on a class list. All students who return a signed consent form/permission slip (whether it is affirmative or negative) will be eligible to win a $20.00 gift certificate for a local store (e.g., for a CD or tape). One student’s name will be drawn from each class. On the day of the study, students with parental consent will be invited by the researcher to participate in the survey. The student's consent will be assumed if he/she completes the questionnaire.

Confidentiality:
No identifying information will be collected other than basic demographic information (e.g., age and grade). Participants will be advised to NOT write their names on the questionnaire. Participants will also be advised that they may leave blank any item that they do not wish to answer. Participants will return their questionnaires directly to the researcher in a sealed envelope. Only the student investigator and her (4) committee members (all UBC faculty) will have access to the data. All data will be treated as confidential and only group data will be reported. INDIVIDUAL SCHOOLS AND SCHOOL DISTRICTS WILL NOT BE IDENTIFIED IN ANY EXTERNAL REPORTS.

Qualifications of the Investigator:
The student investigator will conduct the study under the supervision of her committee members. Susan Dahinten is a third year doctoral candidate with experience in survey research. In her capacity as a registered nurse, the student investigator has planned, coordinated, and evaluated community-based health promotion programs for high school students in the interior of British Columbia. The supervising committee, collectively, have extensive experience in survey research including school-based research related to stress, risk and resiliency among children and adolescents.

Benefits of the Study to Participating Schools:
Teachers in the participating classes may use the content as a springboard for their own class discussions of stress management, health related behaviors, or interpersonal relationships. The student researcher will donate a copy of "Flirting or Hurting: A Teacher's Guide on Student-to-Student Sexual Harassment in Schools" to each school that participates in the study. School counsellors will also be given a list of references and resource materials compiled by the student researcher relating to peer harassment among adolescents. In addition, all participants will receive a handout addressing the topic of peer teasing, bullying, and harassment. A copy of the final dissertation report will be made available to all participating schools. This information may assist each school to prioritize programming around health and social issues.
To: Susan Dahinten  
Doctoral Candidate, School of Nursing  
University of British Columbia

Re: Study to Examine School-Based Stress and the Health of Adolescents: Phase 2

Yes, you have permission to conduct research in this school district as outlined in your recent letter.  

Please contact me to provide further information about the study  

No, I am not able to grant permission.

Additional comments:

______________________________
District Superintendent of Schools

______________________________  ____________________
School District  Date
We ask that you indicate on the permission slip provided on page 3 whether or not your son/daughter has permission to participate. Would you kindly sign and date the slip and have your son/daughter return it to school tomorrow. Also, please keep this letter and copy of the permission slip for your own information. Please note that students who return signed permission slips (whether or not you consent) have the opportunity to win a $20.00 gift certificate. Thank you very much for considering this request.

Sincerely,

Susan Dahinten, RN, PhD Student
UBC School of Nursing

Consent:
Please KEEP THIS COPY for your records. Please sign and return the Parental Informed Consent Form on Page 3 whether or not you are consenting to your son/daughter’s participation in the study.

I understand that participation in this study is entirely voluntary and that I may refuse permission for my son/daughter’s participation or withdraw his/her participation at any time during this research project. Refusal to participate or withdrawal from this project will in no way affect my son/daughter’s academic standing or other educational opportunities.

I have received a copy of this consent form for my own records.

Student’s Name: __________________________________________________________

1. On the basis of the above, I CONSENT to my daughter/son’s participation in this study.

   Parent or Guardian’s Signature: ___________________________ Date: ______________

2. On the basis of the above, I DO NOT CONSENT to my daughter/son’s participation in this study.

   Parent or Guardian’s Signature: ___________________________ Date: ______________
APPENDIX H
Protocol for Administering the Survey

- ask if there are any students who have returned their permission slips today
- ask the teacher which students are not participating and what they should be doing
- ask if there are any students who may need special help.

Introduction to Students - set a serious but friendly tone for administration
- ask students to clear off their desks and get out a pen or pencil.
- move desks apart if they are too close (if possible)

Remind participants:
- the survey is not a test - no right or wrong answers – “just your own thoughts and opinions”
- still very serious - answer all the questions honestly and completely.
- no talking and no looking at someone else’s questionnaire. “Don’t worry about what anyone else puts down, just mark what you think and how you feel”.
- confidentiality – remind students to not put their name on the questionnaire and to not let other students see their answers
- draw for the gift certificate will be made at the end of the class.

HAND OUT QUESTIONNAIRES – tell students to not start until instructed to do so
- yellow forms are for guys and green for girls, same questions, but gender specific
- “Questionnaire is shorter than it looks”, explain skip patterns if first item is N/A
- “You might find some of the questions strange. Also, some questions may seem personal and some are about things which not everyone does, or problems that not everyone has. Don’t worry about this. If you are not sure how to answer, just circle the response that best describes you.”

TIME TO BEGIN ...
- ask students to do the first page and then stop and wait for further instructions
- second page - school-based stressors: review the two-part format of questions
- draw attention to the time frame - last two months unless question indicates otherwise
- remind students to answer honestly and quickly, but read the directions carefully, they should raise a hand if they have a question.

Instructions related to Part K questions on peer behaviours
- define “peers”, and stress that items refers to behaviour “even if just joking”
- draw students attention to 3 parts of question

- Make a note of total class size, number of returned permission slips, and number of students who are participating.

End of Class
- Collect all surveys. Thank students for their time. Questions/comments?
- Make draw for gift certificate. Otherwise it can be announced later. Hand out candies.
APPENDIX I - Questionnaire

UNDERSTANDING STRESS AND THE HEALTH OF ADOLESCENTS

Thank you for agreeing to participate in this study. Your participation will help schools and school nurses to better understand what is important to people your age. This questionnaire asks about different kinds of stress. Some of them are very mild, and others are more serious.

Please read each item quickly but carefully before responding. It is important that you answer each question as thoughtfully and honestly as possible. However, participation in this study is completely voluntary. If there is any question that you do not wish to answer, just leave it blank. And remember, THIS IS NOT A TEST. There are no right or wrong answers.

To ensure the privacy of your answers, an envelope has been provided. PLEASE DO NOT PUT YOUR NAME ON THE QUESTIONNAIRE OR THE ENVELOPE. Upon completing the questionnaire, put it in the envelope. All your answers will be kept strictly confidential. Remember that NO ONE AT SCHOOL OR IN THE COMMUNITY (NOT EVEN YOUR PARENTS) WILL EVER SEE YOUR ANSWERS.

THANK YOU FOR YOUR HELP
Susan Dahinten, RN, PhD Candidate (Nursing),
University of British Columbia
Spring, 1998

These are EXAMPLES of the questions you will be asked and how to respond.

(a) How often do you go to the movies? CIRCLE the response that best describes your behavior during the past TWO MONTHS:
1. Seldom or never
2. Once a month
3. Once a week
4. More than once a week

(b) I worry about my health. CIRCLE the response that best describes you:
1. Describes me very poorly.
2. Describes me poorly.
3. Describes me well.
4. Describes me very well.
Part A: Facts About Yourself

This part of the questionnaire asks some general questions about you and your family.

1. How old are you? ____________ (years)

2. Are you male or female? (Circle the correct response.)
   1. Male
   2. Female

3. What grade are you in? ________________

4. Overall, how well are you doing in school, in your ACADEMIC COURSES, e.g. English, Math, Socials, Sciences? (Circle your overall average.)
   1. mostly A's
   2. mostly A's and B's
   3. mostly B's
   4. mostly B's and C's
   5. mostly C's
   6. mostly C's and D's
   7. mostly D's and F's

5. How long have you lived in Canada? _______ (years)

6. What language do you speak most often at home? (If more than one, list all).

7. How do you describe yourself in terms of ethnic or cultural heritage? (Circle one response.)
   1. White (Anglo, Caucasian, etc.)
   2. Aboriginal/First Nations
   3. Asian (Chinese, Japanese, Korean, Vietnamese etc.)
   4. East Indian or South Asian
   5. Black (African, Haitian, Jamaican, etc.)
   6. Latin (Mexican, South American, etc.)
   7. Other. If you would describe your ethnic or cultural heritage in some way that is not listed above, please describe your heritage:

*** STOP HERE AND WAIT FOR FURTHER INSTRUCTIONS ***
**Part B:**
The next part of the questionnaire asks about things at school that are a problem for some students. For each statement, please choose one response that indicates **HOW OFTEN**, if at all, this has been a problem for you **DURING THE LAST TWO MONTHS**, and a second response to indicate **HOW UPSETTING** this has been for you.

---

**THIS IS AN EXAMPLE** of how to answer this set of questions:

<table>
<thead>
<tr>
<th>During the LAST TWO MONTHS, how frequently has this happened to you or been a concern or problem for you?</th>
<th>If this has happened to you or been a concern, how stressful or how upsetting was this for you?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>0</td>
</tr>
<tr>
<td>1 or 2 times</td>
<td>1</td>
</tr>
<tr>
<td>3 to 5 times</td>
<td>2</td>
</tr>
<tr>
<td>Once a week or 5 to 10 times</td>
<td>3</td>
</tr>
<tr>
<td>Several times a week</td>
<td>4</td>
</tr>
<tr>
<td>Daily or almost daily</td>
<td>5</td>
</tr>
</tbody>
</table>

1. **Disagreements with your parents**
   - **During the LAST TWO MONTHS:** 3
   - **If this has happened to you:** 1

2. **Friends wanting to borrow money.**
   - **During the LAST TWO MONTHS:** 3
   - **If this has happened to you:** 1
THINK ABOUT THE LAST TWO MONTHS

<table>
<thead>
<tr>
<th>During the LAST TWO MONTHS, how frequently has this happened to you or been a concern or problem for you?</th>
<th>If this has happened to you or been a concern, how stressful or how upsetting was this for you?</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
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</tr>
<tr>
<td>4</td>
<td>Several times a week</td>
</tr>
<tr>
<td>5</td>
<td>Daily or almost daily</td>
</tr>
</tbody>
</table>

1. Being pressured to skip class or cheat
   - 0
   - 1
   - 2
   - 3
   - 4
   - 5
   - 0
   - 1
   - 2
   - 3
   - 4

2. Being criticized by teachers
   - 0
   - 1
   - 2
   - 3
   - 4
   - 5
   - 0
   - 1
   - 2
   - 3
   - 4

3. Being picked out by the teacher for poor work
   - 0
   - 1
   - 2
   - 3
   - 4
   - 5
   - 0
   - 1
   - 2
   - 3
   - 4

4. Having bad classes or teachers
   - 0
   - 1
   - 2
   - 3
   - 4
   - 5
   - 0
   - 1
   - 2
   - 3
   - 4

5. Being disciplined at school
   - 0
   - 1
   - 2
   - 3
   - 4
   - 5
   - 0
   - 1
   - 2
   - 3
   - 4

6. Having problems/arguments with teachers or principal
   - 0
   - 1
   - 2
   - 3
   - 4
   - 5
   - 0
   - 1
   - 2
   - 3
   - 4

7. Having teachers favor other students
   - 0
   - 1
   - 2
   - 3
   - 4
   - 5
   - 0
   - 1
   - 2
   - 3
   - 4
### THINK ABOUT THE LAST TWO MONTHS.

<table>
<thead>
<tr>
<th></th>
<th>During the LAST TWO MONTHS, how frequently has this happened to you or been a concern or problem for you?</th>
<th>If this has happened to you or been a concern, how stressful or how upsetting was this for you?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Never</td>
<td>1 or 2 times</td>
</tr>
<tr>
<td>8. Worry about keeping up with others in the class</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>9. Worry about performance in extracurricular activities at school (e.g. music or sports)</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>10. Having concerns about the difficulty of some subjects</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>11. Having concerns about Homework or assignments</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>12. Being uncomfortable having to read aloud or talk in front of the class</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>13. Worry about grades at school</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>14. Noise &amp; interruptions during class or study time</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>
**Part C:** The next set of questions ask about your health. For each statement below, please circle the number that indicates how often, if at all, you have had or felt the following way:

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Seldom or never</td>
<td>A few times</td>
<td>About once a week</td>
<td>More than once a week</td>
<td>Most days</td>
</tr>
<tr>
<td><strong>THINK ABOUT THE LAST TWO MONTHS.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How often have you ....</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Felt dizzy</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2. Felt overtired</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3. Had headaches</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4. Had other aches or pains, e.g. back ache</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5. Had rashes or other skin problems</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6. Had diarrhea or constipation</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7. Had stomach aches or cramps</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8. Felt nauseated (sick to your stomach) or vomited (threw up)</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
**Part D:** Below are five sentences that describe some teenagers. For each statement, please circle the response that indicates how well the statement describes YOU. These questions are NOT LIMITED to the last two months.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Some teenagers are often disappointed with themselves</td>
<td>Describes me very poorly</td>
<td>Describes me quite poorly</td>
<td>Describes me quite well</td>
<td>Describes me very well</td>
</tr>
<tr>
<td>2. Some teenagers don't like the way they are leading their life</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3. Some teenagers are happy with themselves most of the time</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4. Some teenagers like the kind of person they are</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5. Some teenagers are very happy being the way they are</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
Part E: Below is a list of statements that describe some people. Please circle the T if the statement is true or mostly true for you. Circle the F if the item is false or mostly false for you. If unsure, circle the one that is closer to being right. These questions are NOT LIMITED to the last two months.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>TRUE</th>
<th>FALSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>It is sometimes hard for me to go on with my work if I am not encouraged.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>2.</td>
<td>I sometimes feel resentful when I don't get my way.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>3.</td>
<td>On a few occasions, I have given up doing something because I thought too little of my ability.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>4.</td>
<td>No matter who I'm talking to, I'm always a good listener.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>5.</td>
<td>There have been occasions when I took advantage of someone.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>6.</td>
<td>I'm always willing to admit it when I make a mistake.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>7.</td>
<td>I sometimes try to get even rather than forgive and forget.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>8.</td>
<td>I am always courteous, even to people who are disagreeable.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>9.</td>
<td>I have never been irritated when people expressed ideas very different from my own.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>10.</td>
<td>There have been times when I was quite jealous of the good fortune of others.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>11.</td>
<td>I am sometimes irritated by people who ask favors of me.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>12.</td>
<td>I have never deliberately said something that hurt someone's feelings.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>13.</td>
<td>There have been times when I felt like rebelling against people in authority even though I knew they were right.</td>
<td>T</td>
<td>F</td>
</tr>
</tbody>
</table>

The next set of questions refers to the past week.
Part F: Below is a list of some of the ways young people may feel or behave. Please indicate how often you have felt this way DURING THE PAST WEEK by circling the appropriate number.

<table>
<thead>
<tr>
<th>DURING THE PAST WEEK ...</th>
<th>Rarely or none of the time (less than 1 day)</th>
<th>Some or a little of the time (1-2 days)</th>
<th>Occasionally or a moderate amount of time (3-4 days)</th>
<th>A lot or all of the time (5-7 days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I was bothered by things that usually don’t bother me.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2. I did not feel like eating; my appetite was poor.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3. I felt that I was just as good as other people.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4. I had trouble keeping my mind on what I was doing.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5. I felt hopeful about the future.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>6. I felt depressed.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>7. I felt that everything I did was an effort.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>8. I thought that my life had been a failure.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>9. I felt fearful.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>10. I could not “get going”.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>11. I was happy.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>12. My sleep was restless.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>13. I talked less than usual.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>14. I felt lonely.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>15. People were unfriendly.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>16. I enjoyed life.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>17. I had crying spells.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>18. I felt sad.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>19. I felt that people disliked me.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>20. I felt that I could not shake off the blues even with help from my family.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
Part G: This part of the questionnaire asks some questions about your experiences with cigarettes, alcohol and other drugs DURING THE LAST TWO MONTHS. Please circle one response for each item.

PART G1: The following questions ask about your experience with cigarettes.

1. Have you ever smoked cigarettes, other than trying a few drags?  
   1. Yes  
   2. No

*** IF YOU HAVE NEVER SMOKED CIGARETTES, GO TO PART G2 ON THE NEXT PAGE ***

THINK ABOUT THE LAST TWO MONTHS...

2. During the LAST TWO MONTHS, how often did you smoke cigarettes?  
   1. Not at all  
   2. Once or twice  
   3. A few times  
   4. Once or twice a week  
   5. Several times a week  
   6. Every day or almost everyday

3. During the LAST TWO MONTHS, how many cigarettes did you smoke?  
   1. None  
   2. 1 or less cigarettes per day  
   3. 2 to 5 cigarettes per day  
   4. 6 to 10 cigarettes per day  
   5. 11 to 19 cigarettes per day  
   6. 20 or more cigarettes per day
PART G2: The next questions ask about your experience with drinking alcohol, including, beer, wine, wine coolers, and liquor (vodka, rum, whisky etc.).

4. Have you ever had alcohol (beer, wine, wine coolers, or liquor) to drink, other than a few sips to see what it was like?

1. Yes
2. No

*** IF YOU HAVE NEVER USED ALCOHOL, GO TO PART G3 ON THE NEXT PAGE ***

THINK ABOUT THE LAST TWO MONTHS ...

5. In the LAST TWO MONTHS, how often have you had alcohol to drink?

1. Not at all during the last two months
2. Once or twice
3. A few times
4. Once or twice a week
5. Several times a week
6. Every day or almost everyday

6. During the LAST TWO MONTHS, when you drank alcohol, how many drinks did you usually have at any one time?

1. None, I didn’t drink during last two months
2. Less than one drink
3. 1 drink
4. 2 drinks
5. 3 drinks
6. 4 drinks
7. 5 or more drinks

Note: One drink equals - one can/bottle of beer
- one 4 oz. glass of wine
- 1 oz. of hard liquor drink
7. How many times during the **LAST TWO MONTHS** have you been drunk or “very, very high” on alcohol?

1. Not once during the last two months
2. Once
3. Twice
4. Three or four times
5. Once a week
6. More than once a week

8. How many times during the **LAST TWO MONTHS** have you driven after drinking alcohol or ridden with a driver who had been drinking alcohol.

1. Not once during the last two months
2. Once
3. Twice
4. Three or four times
5. Once a week
6. More than once a week

**PART G3:** The next questions ask about your experience with marijuana (pot, grass) or hashish (hash, hash oil).

9. Have you ever used marijuana or hashish?

1. Yes
2. No

*** IF YOU HAVE NEVER TRIED MARIJUANA OR HASHISH, GO TO PART H ON THE NEXT PAGE ***

10. During the **LAST TWO MONTHS**, how often did you use marijuana or hashish?

1. Not at all during the last two months
2. Once or twice
3. Three or four times
4. Once or twice a week
5. Several times a week
6. Every day or almost everyday

**YOUR ANSWERS ARE PRIVATE.**
NO ONE FROM YOUR HOME OR SCHOOL WILL EVER SEE YOUR ANSWERS TO THESE QUESTIONS.
**Part H: The next part of the questionnaire asks about your health related behaviors DURING THE LAST TWO (2) MONTHS. Please respond to the following statements and questions by circling one response for each.**

**DURING THE LAST TWO MONTHS ....**

<table>
<thead>
<tr>
<th>Question</th>
<th>Response Options</th>
</tr>
</thead>
</table>
| 1. I got an adequate amount of sleep.                                   | 1. Never  
2. 1 to 2 times a week  
3. 3 to 4 times a week  
4. 5 to 6 times a week  
5. Daily                                                                 |
| 2. I ate a healthy breakfast each morning.                              | 1. Never  
2. 1 to 2 times a week  
3. 3 to 4 times a week  
4. 5 to 6 times a week  
5. Daily                                                                 |
| 3. I ate at least 4 servings of fresh fruit and vegetables each day.     | 1. Never  
2. 1 to 2 times a week  
3. 3 to 4 times a week  
4. 5 to 6 times a week  
5. Daily                                                                 |
| 4. I limited the amount of junk food that I eat.                        | 1. Never  
2. 1 to 2 times a week  
3. 3 to 4 times a week  
4. 5 to 6 times a week  
5. Daily                                                                 |
DURING THE LAST 2 MONTHS....

5. How many times per week, on average, did you exercise or participate in physical activities that made you sweat and breathe hard, such as jogging, bicycling, dancing, tennis, swimming, soccer, or other aerobic activities?

   1. Never
   2. 1 to 2 times a week
   3. 3 to 4 times a week
   4. 5 to 6 times a week
   5. Daily

6. How often, if at all, did you engage in binge-eating, (eating so much food in a short period of time that you felt out of control and would have been embarrassed if other people saw you)?

   1. Not at all during the last 2 months
   2. Once or twice
   3. Three or four times
   4. Once or twice a week
   5. Several times a week
   6. Every day or almost everyday

7. How often, if at all, did you make yourself vomit or throw-up on purpose after eating?

   1. Not at all during the last 2 months
   2. Once or twice
   3. Three or four times
   4. Once or twice a week
   5. Several times a week
   6. Every day or almost everyday

8. How often, if at all, did you take diet pills or steroids without a prescription or without a doctor telling you to take them?

   1. Not at all during the last two months
   2. 1 to 2 times
   3. 3 to 5 times
   4. 6 to 9 times
   5. 10 to 19 times
   6. 20 or more times
DURING THE LAST TWO MONTHS ...

The next few questions ask about your sexual experiences.

9. Did you have sexual intercourse during the LAST TWO MONTHS?  
   1. Yes  
   2. No

*** IF YOU DID NOT HAVE SEXUAL INTERCOURSE DURING THE LAST 2 MONTHS, GO TO PART I ON THE NEXT PAGE ***

10. When you had sex during the last 2 MONTHS, how often did you or your partner use a condom?  
    1. never  
    2. hardly ever  
    3. some of the time  
    4. about half the time  
    5. most of the time  
    6. almost always

11. Did you or your partner use a condom the last time you had sexual intercourse?  
    1. Yes  
    2. No

YOUR ANSWERS ARE PRIVATE. NO ONE FROM YOUR HOME OR SCHOOL WILL EVER SEE YOUR ANSWERS TO THESE QUESTIONS.
**Part I:** This part of the questionnaire is about safety. Circle the response that best describes how you feel.

**DURING THE LAST TWO MONTHS ...**

<table>
<thead>
<tr>
<th>Question</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How often have you felt unsafe when you are at school?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. How often have you felt unsafe going to or from school?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

The next two sets of questions (J & K) asks about BEHAVIORS OF YOUR PEERS during SCHOOL-RELATED TIMES such as:
- when you're in school or on school grounds during the school day and after the school day ends, for example, at a sports activity in the evening
- when you're on your way to school or on your way home, or
- when you're on a school trip

**Part J:**

**DURING THE LAST TWO MONTHS...**

<table>
<thead>
<tr>
<th>Question</th>
<th>Never</th>
<th>Once</th>
<th>2 times</th>
<th>3 times</th>
<th>More than 3 times</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How often has one of your peers stolen something of yours?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. How often has one of your peers damaged something of yours on purpose?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. How often has one of your peers physically assaulted you in some way, e.g. hit, or kicked you?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Part K: This set of questions also asks about BEHAVIORS OF YOUR PEERS during SCHOOL-RELATED TIMES as described on the previous page.

There are THREE PARTS to each of the following questions.

1. Choose one response that indicates HOW OFTEN, if at all, this has happened to you during the LAST TWO MONTHS, WHEN YOU DID NOT WANT IT TO HAPPEN.
2. If this has happened to you, choose a second response to indicate HOW UPSETTING this was for you.
3. If this has happened to you, indicate WHO DID THIS.

**THIS IS AN EXAMPLE** of how to answer this set of questions.

<table>
<thead>
<tr>
<th></th>
<th>During the LAST TWO MONTHS, how often, if at all, has one of your peers done the following things to you WHEN YOU DID NOT WANT THEM TO, even if they were just teasing?</th>
<th>If this has happened to you, how stressful or how upsetting was this for you?</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Never</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>1 or 2 times</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>3 to 5 times</td>
<td>Slightly upsetting</td>
</tr>
<tr>
<td>3</td>
<td>Once a week or 5 to 10 times</td>
<td>Somewhat upsetting</td>
</tr>
<tr>
<td>4</td>
<td>Several times a week</td>
<td>Moderately upsetting</td>
</tr>
<tr>
<td>5</td>
<td>Daily or almost daily</td>
<td>Very upsetting</td>
</tr>
</tbody>
</table>

1. Made a negative comment about your physical appearance.
   
   If so, who did this?
   - mostly girls
   - mostly boys
   - both girls and boys

   ![Circle](square)
THINK ABOUT THE LAST TWO MONTHS ...

<table>
<thead>
<tr>
<th>During the <strong>LAST TWO MONTHS</strong>, how often, if at all, has one of your peers done the following things to you WHEN YOU DID NOT WANT THEM TO, even if they were just teasing?</th>
<th>If this has happened to you, how stressful or how upsetting was this for you?</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 Never</td>
<td>0 Not upsetting - or - not relevant</td>
</tr>
<tr>
<td>1 1 or 2 times</td>
<td>1 Slightly upsetting</td>
</tr>
<tr>
<td>2 3 to 6 times</td>
<td>2 Somewhat upsetting</td>
</tr>
<tr>
<td>3 Once a week or 5 to 10 times</td>
<td>3 Moderately upsetting</td>
</tr>
<tr>
<td>4 Several times a week</td>
<td>4 Very upsetting</td>
</tr>
<tr>
<td>5 Daily or almost daily</td>
<td></td>
</tr>
</tbody>
</table>

1. Sexually harassed you?
   If so, who did this?
   mostly girls
   mostly boys
   both girls and boys

2. Spread sexual rumors or wrote sexual graffiti about you on bathroom walls or hallways etc.
   If so, who did this?
   mostly girls
   mostly boys
   both girls and boys

3. Called you gay or lesbian, or something similar.
   If so, who did this?
   mostly girls
   mostly boys
   both girls and boys
**THINK ABOUT THE LAST TWO MONTHS ...**

<table>
<thead>
<tr>
<th>During the LAST TWO MONTHS, how often, if at all, has one of your peers done the following things to you WHEN YOU DID NOT WANT THEM TO, even if they were just teasing?</th>
<th>If this has happened to you, how stressful or how upsetting was this for you?</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Never</td>
<td>1 or 2 times</td>
</tr>
<tr>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Not upsetting - or - not relevant</td>
<td>Slightly upsetting</td>
</tr>
</tbody>
</table>

4. Made a negative comment or joke about your race or ethnicity.
   If so, who did this?
   - mostly girls
   - mostly boys
   - both girls and boys

5. Made negative comments about your body or parts of your body, suggesting that you don't look feminine enough.
   If so, who did this?
   - mostly girls
   - mostly boys
   - both girls and boys

6. Made fun of you or called you names for having too much sexual experience.
   If so, who did this?
   - mostly girls
   - mostly boys
   - both girls and boys
THINK ABOUT THE LAST TWO MONTHS ...

<table>
<thead>
<tr>
<th></th>
<th>During the <strong>LAST TWO MONTHS</strong>, how often, if at all, has one of your peers done the following things to you <strong>WHEN YOU DID NOT WANT THEM TO</strong>, even if they were just teasing?</th>
<th>If this has happened to you, how stressful or how upsetting was this for you?</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. Teased you having PMS or your period.</td>
<td><strong>0</strong> Never  <strong>1 or 2 times</strong>  <strong>2</strong> 3 to 6 times  <strong>3</strong> Once a week or <strong>4</strong> 6 to 10 times  <strong>5</strong> Several times a week  <strong>6</strong> Daily or almost daily</td>
<td><strong>0</strong> Not upsetting or - or - not relevant  <strong>1</strong> Slightly upsetting  <strong>2</strong> Somewhat upsetting  <strong>3</strong> Moderately upsetting  <strong>4</strong> Very upsetting</td>
</tr>
<tr>
<td>If so, who did this?</td>
<td>□ mostly girls  □ mostly boys  □ both girls and boys</td>
<td>□ 0  □ 1  □ 2  □ 3  □ 4  □ 5</td>
</tr>
<tr>
<td>8. Called you a name like 'butch' etc., suggesting that you are not feminine enough.</td>
<td><strong>0</strong> Never  <strong>1 or 2 times</strong>  <strong>2</strong> 3 to 6 times  <strong>3</strong> Once a week or <strong>4</strong> 6 to 10 times  <strong>5</strong> Several times a week  <strong>6</strong> Daily or almost daily</td>
<td>□ 0  □ 1  □ 2  □ 3  □ 4  □ 5</td>
</tr>
<tr>
<td>If so, who did this?</td>
<td>□ mostly girls  □ mostly boys  □ both girls and boys</td>
<td>□ 0  □ 1  □ 2  □ 3  □ 4  □ 5</td>
</tr>
<tr>
<td>9. Put down females in general.</td>
<td><strong>0</strong> Never  <strong>1 or 2 times</strong>  <strong>2</strong> 3 to 6 times  <strong>3</strong> Once a week or <strong>4</strong> 6 to 10 times  <strong>5</strong> Several times a week  <strong>6</strong> Daily or almost daily</td>
<td>□ 0  □ 1  □ 2  □ 3  □ 4  □ 5</td>
</tr>
<tr>
<td>If so, who did this?</td>
<td>□ mostly girls  □ mostly boys  □ both girls and boys</td>
<td>□ 0  □ 1  □ 2  □ 3  □ 4  □ 5</td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th></th>
<th><strong>During the LAST TWO MONTHS, how often, if at all, has one of your peers done the following things to you WHEN YOU DID NOT WANT THEM TO, even if they were just teasing?</strong></th>
<th><strong>If this has happened to you, how stressful or how upsetting was this for you?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>10. Gave you an unwelcome or crude compliment about your body or parts of your body.</strong></td>
<td><strong>0</strong> Never <strong>1 or 2 times</strong> <strong>2 to 6 times</strong> <strong>3 times a week or 6 to 10 times</strong> <strong>4 Several times a week</strong> <strong>5 Daily or almost daily</strong></td>
<td><strong>0</strong> Not upsetting <strong>1 Slightly upsetting</strong> <strong>2 Somewhat upsetting</strong> <strong>3 Modestly upsetting</strong> <strong>4 Very upsetting</strong></td>
</tr>
<tr>
<td>If so, who did this? mostly girls</td>
<td></td>
<td>→ 0 1 2 3 4 5</td>
</tr>
<tr>
<td>mostly boys</td>
<td></td>
<td>→ 0 1 2 3 4 5</td>
</tr>
<tr>
<td>both girls and boys</td>
<td></td>
<td>→ 0 1 2 3 4 5</td>
</tr>
<tr>
<td><strong>11. Showed you a sexual cartoon or picture or told you a sexual joke that you didn't want to see or hear.</strong></td>
<td><strong>0</strong> Never <strong>1 or 2 times</strong> <strong>2 to 6 times</strong> <strong>3 times a week or 6 to 10 times</strong> <strong>4 Several times a week</strong> <strong>5 Daily or almost daily</strong></td>
<td><strong>0</strong> Not upsetting <strong>1 Slightly upsetting</strong> <strong>2 Somewhat upsetting</strong> <strong>3 Modestly upsetting</strong> <strong>4 Very upsetting</strong></td>
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<td>If so, who did this? mostly girls</td>
<td></td>
<td>→ 0 1 2 3 4 5</td>
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<tr>
<td>mostly boys</td>
<td></td>
<td>→ 0 1 2 3 4 5</td>
</tr>
<tr>
<td>both girls and boys</td>
<td></td>
<td>→ 0 1 2 3 4 5</td>
</tr>
<tr>
<td><strong>12. Flashed or “mooned” you.</strong></td>
<td><strong>0</strong> Never <strong>1 or 2 times</strong> <strong>2 to 6 times</strong> <strong>3 times a week or 6 to 10 times</strong> <strong>4 Several times a week</strong> <strong>5 Daily or almost daily</strong></td>
<td><strong>0</strong> Not upsetting <strong>1 Slightly upsetting</strong> <strong>2 Somewhat upsetting</strong> <strong>3 Modestly upsetting</strong> <strong>4 Very upsetting</strong></td>
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<td>If so, who did this? mostly girls</td>
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<td>→ 0 1 2 3 4 5</td>
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<td></td>
<td>→ 0 1 2 3 4 5</td>
</tr>
</tbody>
</table>
THINK ABOUT THE LAST TWO MONTHS...

<table>
<thead>
<tr>
<th>Question</th>
<th>Frequency</th>
<th>Stressfulness</th>
</tr>
</thead>
<tbody>
<tr>
<td>During the LAST TWO MONTHS, how often, if at all, has one of your peers done the following things to you WHEN YOU DID NOT WANT THEM TO, even if they were just teasing?</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>13. Made a sexual gesture or stared at your body in a sexual way.</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>If so, who did this? mostly girls mostly boys both girls and boys</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Followed you around or pestered you for a date after you said you weren't interested.</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>If so, who did this? Mostly girls Mostly boys Both girls and boys</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Yelled something sexual or whistled or howled at you when you walked by.</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>If so, who did this? mostly girls mostly boys both girls and boys</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### THINK ABOUT THE LAST TWO MONTHS ...

<table>
<thead>
<tr>
<th>Event Description</th>
<th>Frequency</th>
<th>Stressfulness</th>
</tr>
</thead>
<tbody>
<tr>
<td>During the LAST TWO MONTHS, how often, if at all, has one of your peers done the following things to you WHEN YOU DID NOT WANT THEM TO, even if they were just teasing?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Touched, grabbed, or pinched you in a sexual way.</td>
<td>0 Never</td>
<td>0 Not upsetting</td>
</tr>
<tr>
<td>If so, who did this? mostly girls mostly boys both girls and boys</td>
<td>1 1 or 2 times</td>
<td>1 Some-what upsetting</td>
</tr>
<tr>
<td></td>
<td>2 3 to 6 times</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 Once a week or 5 to 10 times</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4 Several times a week</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 Daily or almost daily</td>
<td></td>
</tr>
<tr>
<td>17. Stood too close or brushed up against you in a sexual way.</td>
<td>0 Never</td>
<td>0 Not upsetting</td>
</tr>
<tr>
<td>If so, who did this? mostly girls mostly boys both girls and boys</td>
<td>1 1 or 2 times</td>
<td>1 Some-what upsetting</td>
</tr>
<tr>
<td></td>
<td>2 3 to 6 times</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 Once a week or 5 to 10 times</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4 Several times a week</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 Daily or almost daily</td>
<td></td>
</tr>
<tr>
<td>18. Pulled at your clothing in a sexual way or pulled your clothing down or off.</td>
<td>0 Never</td>
<td>0 Not upsetting</td>
</tr>
<tr>
<td>If so, who did this? mostly girls mostly boys both girls and boys</td>
<td>1 1 or 2 times</td>
<td>1 Some-what upsetting</td>
</tr>
<tr>
<td></td>
<td>2 3 to 6 times</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 Once a week or 5 to 10 times</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4 Several times a week</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 Daily or almost daily</td>
<td></td>
</tr>
<tr>
<td></td>
<td>During the LAST TWO MONTHS, how often, if at all, has one of your peers done the following things to you WHEN YOU DID NOT WANT THEM TO, even if they were just teasing?</td>
<td>If this has happened to you, how stressful or how upsetting was this for you?</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>19. Blocked your way or cornered you in a sexual way.</td>
<td>0 Never 1 or 2 times 2 3 to 5 times 3 Once a week or 6 to 10 times 4 Several times a week 5 Daily or almost daily</td>
<td>0 Not upsetting - or - not relevant 1 Slightly upsetting 2 Some-what upsetting 3 Moderately upsetting 4 Very upsetting</td>
</tr>
<tr>
<td>Who did this? mostly girls mostly boys both girls and boys</td>
<td>0 1 2 3 4 5</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td></td>
<td>0 1 2 3 4 5</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>20. Kissed or hugged you when you didn't want them to.</td>
<td>0 Never 1 or 2 times 2 3 to 5 times 3 Once a week or 6 to 10 times 4 Several times a week 5 Daily or almost daily</td>
<td>0 Not upsetting - or - not relevant 1 Slightly upsetting 2 Some-what upsetting 3 Moderately upsetting 4 Very upsetting</td>
</tr>
<tr>
<td>If so, who did this? mostly girls mostly boys both girls and boys</td>
<td>0 1 2 3 4 5</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td></td>
<td>0 1 2 3 4 5</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>21. Forced you to do something sexual other than kissing or hugging.</td>
<td>0 Never 1 or 2 times 2 3 to 5 times 3 Once a week or 6 to 10 times 4 Several times a week 5 Daily or almost daily</td>
<td>0 Not upsetting - or - not relevant 1 Slightly upsetting 2 Some-what upsetting 3 Moderately upsetting 4 Very upsetting</td>
</tr>
<tr>
<td>If so, who did this? mostly girls mostly boys both girls and boys</td>
<td>0 1 2 3 4 5</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td></td>
<td>0 1 2 3 4 5</td>
<td>0 1 2 3 4</td>
</tr>
</tbody>
</table>

NOTE: Please make sure that you have ANSWERED ALL THREE PARTS TO EACH QUESTION in this section, unless your answer to the first part was “Never”.
Part L:
- The previous section (Part K) asked about the teasing and harassing behaviors of your peers. If any of those things happened to you, HOW DID YOU RESPOND? If you answered "never" to ALL ITEMS in Part K, go to Part M.
- You may have responded in more than one way to the same behavior. For each of the following possible responses, please indicate whether you used each response (YES OR NO), and if yes, HOW OFTEN.

<table>
<thead>
<tr>
<th></th>
<th>NO, never used this response</th>
<th>YES</th>
<th>If yes, how often?</th>
<th>Sometimes</th>
<th>Half the time</th>
<th>Frequently</th>
<th>All or Almost All of the Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I told myself it wasn't really important.</td>
<td>No</td>
<td>Yes</td>
<td>→</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2.</td>
<td>I told myself to forget the whole thing.</td>
<td>No</td>
<td>Yes</td>
<td>→</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3.</td>
<td>I just kept it to myself and didn't say anything.</td>
<td>No</td>
<td>Yes</td>
<td>→</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4.</td>
<td>I figured he or she must really like me.</td>
<td>No</td>
<td>Yes</td>
<td>→</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5.</td>
<td>I figured it wouldn't have happened if I had behaved or dressed differently.</td>
<td>No</td>
<td>Yes</td>
<td>→</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>6.</td>
<td>I joked around with him/her or made up some excuse and hoped he/she would leave me alone.</td>
<td>No</td>
<td>Yes</td>
<td>→</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>7.</td>
<td>I stayed away from him/her as much as possible.</td>
<td>No</td>
<td>Yes</td>
<td>→</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>8.</td>
<td>I talked to my friends for understanding and support.</td>
<td>No</td>
<td>Yes</td>
<td>→</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>9.</td>
<td>I let him or her know that I didn't like what he/she was doing.</td>
<td>No</td>
<td>Yes</td>
<td>→</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>10.</td>
<td>I told a teacher, counsellor, or other school staff.</td>
<td>No</td>
<td>Yes</td>
<td>→</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>11.</td>
<td>I made a formal complaint to the school.</td>
<td>No</td>
<td>Yes</td>
<td>→</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>12.</td>
<td>Other. Please describe:</td>
<td>No</td>
<td>Yes</td>
<td>→</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
### Part M:

This section asks about YOUR SCHOOL'S RESPONSES to the teasing and harassing behaviors described in Part J. Please indicate how much you agree or disagree with the following statements by circling the appropriate number.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Moderately Disagree</th>
<th>Mildly Disagree</th>
<th>Neither Agree Nor Disagree</th>
<th>Mildly Agree</th>
<th>Moderately Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I am satisfied with the steps that my school has taken to <strong>prevent</strong> the student behaviors described in section K.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>2.</td>
<td>In my opinion, my school does all that it can to <strong>stop</strong> the student behaviors described in section K.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>3.</td>
<td>If a student complained to the teacher or principal about any of the behaviors in section K, something would be done about it.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
• If you would like to COMMENT on any harassment that you have experienced at school, **at any time during your whole school life**, please do so.

• **THANK YOU VERY MUCH** for taking the time to participate in this study.

Comments:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

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