

Effects of physically active leisure,
social support, work stress, and chronic stress
on mental health and physical health:
A longitudinal perspective.

RESEARCH REPORT

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EXECUTIVE SUMMARY

Objectives

The analyses in this project were based on longitudinal data collected as part of the 1994 and 1996 Canadian Population Health Surveys (NPHS), and represent a *follow-up* to the study *Relationship between stress, mental health, physically active leisure, and the sense of well-being as a function of life cycle and multiple role conflict*, supported by a 1996 NHRDP grant. The 1994 and 1996 longitudinal data are used to examine the relationships between work stress, chronic stress, social support, participation in physically active leisure, psychological coping resources (mastery), and mental and physical health from a longitudinal perspective.

This study examined whether: (a) levels of work and chronic stress, recorded in 1994, predicted levels of mental and physical health in 1996; (b) participation in physically active leisure, social support, and selected personal coping resources, reported in 1994, had direct and/or indirect effects on mental and physical health in 1996; (c) participation in physically active leisure, social support and respondents' psychological dispositions buffered or mediated the short-term and long-term effects of stress on health; (d) longitudinal effects of physically active leisure and social support on mental and physical health were influenced by life-cycle, education, and income; and (e) physically active leisure pursuits varied with regard to their stress-reducing and health-enhancing effects.

Method

The samples of the 1994 and 1996 surveys consisted of 20,725 and 81,804 respondents at the household level, respectively. Of the original 1994 sample, 15,670 or 88% of the respondents, were interviewed again in 1996, and formed the longitudinal sample used for the analyses in this report. Proxy responses were excluded from the analyses, reducing the working sample to 12,790 respondents. Analyses of means, hierarchical regression, and path analyses were used and the data weighted where appropriate.

Findings and policy implications

The analyses of the 1994 to 1996 longitudinal data show that work stress and, particularly, chronic stress affected respondents' *mental health* negatively in both 1994 and 1996. This effect was stronger in 1994, but continued to be present in 1996, suggesting that unlike

recent life events stress, the effects of work and chronic stress have an enduring impact over a number of years.

The effects of chronic and work stress on *self-assessed* and *physical health* were less pronounced and seemed to be of a shorter duration. However, chronic stress levels reported by women in 1994 had discernible longitudinal effects on their self-assessed and physical health in 1996.

Higher levels of social support generally contributed directly to lower levels of stress and directly and indirectly to higher levels of *mental health*. Participation in physically active leisure in 1994 and 1996 affected *self-assessed* and *physical health* more strongly than mental health. Individuals with a greater sense of mastery experienced less stress and greater mental and physical health.

Our analyses lent little support to the *buffering* hypothesis about the relationships between physically active leisure participation, social support and mastery, on the one hand, and stress and health on the other. Physically active leisure positively influenced physical and mental health regardless of the level of stress currently being experienced by the respondents. Social support and mastery, likewise, influenced mental and physical health regardless of the level of stress currently being experienced.

Our analyses suggest that gender is strongly associated with people's assessment of mental and self-assessed health, levels of stress, social support, participation in physically active leisure, as well as short-term and long-term relationships between these variables. In general, women reported lower levels of mental and self-assessed health than men, higher levels of work and chronic stress, higher levels of perceived social support, lower levels of participation in physically active leisure, though almost identical levels of physical health.

Distribution of health, stress, social support and participation in physically active leisure, and their relationships, vary strongly by respondents' life-cycle positioning. Transitions from the status of student to being employed, from unemployed to being employed, from single to married, and married without a child to parenthood are marked by increases in mental health, while transitions from being married to being divorced or separated, from employed to becoming a homemaker, and from being married to widowhood in retirement are associated with declines in mental health.

Multivariate analyses presented in this report show that education exercises a statistically significant positive effect on self-assessed and physical health of both men and women, but only on the mental health of women. In general, *chronic stress* has a greater effect on the mental health of higher educated and financially better off respondents, while *work stress* impacts more strongly on the mental health of lower educated and low income Canadians.

Some leisure pursuits emerge from our analyses rather consistently as potential stress-dampers and mental health boosters, while others appear to be devoid of these qualities. A comparison of Canadian findings with U.S. findings from National Population Health Interview Surveys suggests that most stress-health relationships discussed in this report seem to be universal in nature and not limited to Canada only.

From a policy perspective, this report advocates a differentiated or group-specific approach to the study and modification of complex relationships between health, stress, personality coping resources, physically active leisure, and major demographic factors. Any recommendations with regard to possible life-style interventions should be calibrated to specific population groups rather than applied to the population in general.

Control over one's health and stress is seen to a large extent as control over one's time. Severely time-crunched life-cycle groups and persons are restricted in efforts to optimise their life-styles. The greater contribution of physically active leisure to female homemakers' mental health and retirees' lower stress levels testify to the fact that discretionary time is needed to make rational behavioural choices. It is up to society, public policy, and individuals to take account of these factors. From a researcher's perspective, it would be desirable to more fully assess the time dimensions of people's lives (work loads, perceived time pressure) in future studies of stress-health relationships.