



## **Research Report & White Paper**

**2006**

**WORK- LIFE CONFLICT & LIFESTYLE DEPRIVATION**

## Executive Summary

This report frames work-life conflict in terms of its potential costs to the individual, to the organization, and to the health care system. The later two costs are estimated in monetary terms. It uses survey data which was collected by Duxbury and Higgins between 1991 and 2004 to address the following specific questions:

1. What are the costs of work-life conflict and lifestyle deprivation in terms of:
  - a. The individual employee (work-family overload and interference, depressed mood, perceived stress, "burnout", life satisfaction, and physical health)?
  - b. The employing organization (absenteeism, turnover, performance, job satisfaction, commitment, and quality of work relationships)?
  - c. The American health care system?
2. What is the prevalence of work-life conflict among American employees? Which groups are at particularly high risk for work-life conflict (i.e., how is work-life conflict related to gender, job type, dependant care status)?
3. What are the implications of these costs for the formulation of organizational and public policy?

The following observations were made in the report:

- Slightly more than one in three American employees (35.6% to 40% of those sampled) experiences a high level of work-life conflict.
- One third of American employees report high levels of depressed mood.
- Half of American employees experience high levels of perceived stress.
- One quarter of American employees feel "burned out" from their jobs.
- The number of work absences and physician visits are on the rise
- The number of American employees who report high job satisfaction, life satisfaction and that they are in good health is decreasing.
- Women report substantially more work-life conflict than men, regardless of job type or dependent care status.
- Men and women who perform managerial or professional work report substantially more conflict between work and non-work than their counterparts in non-professional positions.
- Men and women with dependent care responsibilities (i.e. childcare, eldercare) report substantially more work-life conflict than their counterparts without such obligations.
- Approximately half of the mothers who work in managerial and professional positions and almost 40% of mothers employed in non-professional positions report high work-life conflict. These percentages have remained very stable over time.
- High work life conflict is associated with decreased wellness in terms of greater perceived stress, depressed mood, and burnout; and poorer physical health, reduced job satisfaction and organizational commitment.
- Greater use of the American medical system (i.e., increased number of physician visits, increased illness), and increased absence from work.
- Workers with high work-life conflict registered 13.2 days of absence per year, compared to only 5.9 days per year in low work-conflict groups.
- 35% of employees with high work-life conflict visited their physician in a 12 month period versus 24% of employees in the low work-conflict groups.
- Employees with high work family conflict made an average of 4.62 visits to the physician in a 12 month period; employees with low work family conflict made an average of 2.17 visits.
- In 2004, work absence among Americans working under conditions of high work-life conflict was estimated at roughly 19.8 million workdays. At output equal to average earnings of \$135 per day (Assuming average annual earnings of \$37,000, this represents a loss to American organizations of at least \$2.7 billion dollars.
- In 2001 physician visits among Americans working under conditions of high work-life conflict was estimated to total 86.9 million. At an average cost of \$35 per visit, this represents public health care expenditures of at least \$425.8. Million to treat individuals for problems related to work-life conflict.

## **TABLE OF CONTENTS**

### **INTRODUCTION**

Why study work-life conflict and lifestyle design deprivation?

Why study the health implications of work-life conflict?

Why study the *costs* of work-life conflict?

### **1. SETTING THE CONTEXT**

1.1 Changes in the work world

1.2 Challenges in the health care system

1.3 Implications

### **2. DEFINITIONS AND CONCEPTS**

2.1 Definitions

2.2 An ecological model of stress and health

### **3. SOURCES OF STRESS**

3.1 Stress in the work domain

3.2 Stress at home

3.3 Stress at the interface: work-life conflict

### **4. MODERATORS OF WORK-LIFE CONFLICT AND THE STRESS RESPONSE**

4.1 Gender

4.2 Job type

4.3 Social support

4.4 Personality and coping style

4.5 Control

4.6 Summary

### **5. OUTCOMES OF WORK-LIFE CONFLICT AND THE STRESS RESPONSE**

5.1 Individual outcomes

5.2 Organizational outcomes

### **6. PREVALENCE OF WORK-LIFE CONFLICT: A PORTRAIT OF AMERICAN EMPLOYEES**

6.1 Description of the studies

6.2 Overview of the findings

6.3 Who's at risk for work-life conflict and health problems?

6.4 The effect of work-life conflict on individual and organizational outcomes

6.5 The effect of work-life control on work-life conflict and individual and organizational outcomes

6.6 Summary

**7. AN ESTIMATE OF THE COST OF WORK-LIFE CONFLICT TO AMERICAN EMPLOYERS AND THE HEALTH CARE SYSTEM**

- 7.1 Model for socio-economic assessment of work-life conflict
- 7.2 Methodology
- 7.3 Summary
- 7.4 Limitations of the estimates

**8. CONCLUSIONS AND RECOMMENDATIONS**

- 8.1 The organization's role in reducing work-life conflict

## INTRODUCTION

### Why study Work-Life Conflict and Lifestyle Design Deprivation?

America's workforce has undergone dramatic changes in the last thirty years. Traditionally, employees have been males with homemaker wives to see to the needs of the family. Today's workforce, however, is a mosaic of different genders, ages, races, ethnic groups, religions, and lifestyles. Women have joined the paid labor force in unprecedented numbers, and many workers, both men and women, now face dual roles as employees and caregivers. With the aging of the population, care giving has been extended to include not only children, but also elderly and disabled family members. These remarkable demographic and social changes mean a host of new challenges for today's workers as they struggle to cope with the often competing pressures of work demands and personal responsibilities.

Work-Life Conflict and Lifestyle Deprivation occur when the cumulative demands of multiple roles at home and at work become too great to manage comfortably. This conflict results in strain of two types: *role overload* (too much to do; too little time!); and *role interference* (when incompatible demands make it difficult to perform the roles, such as occurs when an employee needs to be in two places at the same time). Given the ever-increasing demands on today's worker, it is therefore not surprising that the topic of work-life conflict and Lifestyle Deprivation has been drawing increasing attention from employers, academics, labor and governments as a potential threat to employee health and well-being.

Clearly, the old model of coordinating work and family, which has assumed that one's work role is separate from (and takes precedence over) one's family role, is no longer valid for a majority of the men and women in the world of work today but is still yet strictly enforced in most company's policy. The old adage of leave your problems at the door when you come to work is involuntarily ignored by human nature.

Interrole conflict has been identified as a key component of stress. We all play many roles: employee, boss, subordinate, spouse, parent, sibling, friend, and community member. Each of these roles imposes demands on their incumbents requiring time, energy and commitment. *Work-family conflict* (Recently, the expression, "work and family" has been replaced by the term, "work and lifestyle". This shift in terminology occurred when it became apparent that non-work responsibilities take many forms, including volunteer pursuits and education, as well as the care of dependants. In its newer sense, then, interrole conflict can potentially affect all workers, not just caregivers. In this report, the broader term, "work-life", will be used to refer to all forms of conflict between work and personal life, including work-family stressors.)

## Why study the health implications of work-life conflict?

As in most transition periods, changing behaviors have outpaced social and organizational readiness. Such is the case for today's employees who have largely felt the burden of working and caring for dependents in a world that has been unresponsive to their realities. Dealing with the needs of this changing workforce is new ground for many organizations who have traditionally relied on a "one size fits all" approach to their human resources management. Competitive pressures to streamline and boost productivity make matters worse, as organizations find themselves with fewer resources available to develop and implement initiatives that might help their employees obtain a better balance.

Employers have been slow to respond to the needs of the new work force, and the continuing pressure on employees has contributed to a growing incidence of stress and "burnout". With the existing low level of employer support for employees with work-life conflict, Americans can expect a lower quality of work and family life and an increased risk for stress-related health problems. Work-family conflict, stress and burnout have been linked as causal factors in both physical disease and poor mental health. The combination of work stress and domestic stress threaten an individual's sense of control, efficiency and competence, which in turn, contribute to perceptions of diminished "wellness". Beyond that, the protracted inability to control the work/non-work interface has been associated with elevated cholesterol levels, cardiovascular and gastrointestinal disorders, allergy, and migraine in both men and women.

The threat of work-life conflict to employee well-being, therefore, has implications not only for the many workers who must cope with stress and illness, but also for organizations, governments, and society on the whole. From the employer's perspective, the inability to balance work, personal and family demands has been linked to reduced work performance, increased absenteeism, high turnover, and poor morale (Duxbury & Higgins, 1998). Work-life conflict and Lifestyle Design Deprivation has also been linked to productivity decreases associated with tardiness, unscheduled days off, emergency time off, excessive use of the telephone, missed meetings, and difficulty concentrating on the job (Bureau of National Affairs, 1990). Estimates indicate that at least one quarter of the human resource challenges faced by American organizations are the result of employees having to manage dual responsibilities at home and at work.

From the perspective of governments, the current challenges facing American health care system suggest that policy makers can also ill afford to overlook the significant links between work-life conflict and health. Although the state of health of the population in America is unarguably among the best in the world, AMERICA is in a less enviable position with respect to health expenditures. Concerns with the mounting costs of medical resources in this country have led to recent reviews of the health care systems at the federal level.

Cost-containment strategies have generated considerable concern and debate over the financing and delivery of health care services, to the point where many Americans have come to view America's health care system as being in "perpetual crisis". Whereas it is critical that governments respond to the health care "crisis" by continuing to explore new ways of achieving efficiencies, it may be equally important to step back from the debate in order to investigate ways of reducing the demand for health care services in the first place. It may be a favorable time, therefore, to be more proactive in terms of health promotion. Reducing the level of work-life conflict among American workforce may represent an important step toward improving the quality of work and family life for Americans, reducing the costs to organizations, and decreasing the burden on the health care system.

## **Why study the costs of work-life conflict?**

The purpose of attempting to assess the *costs* of work-life conflict and lifestyle design deprivation in economic terms is based on the observation that perceived significant costs are not absorbed by the members of society who reap the benefits. To date, it has been the business sector that has reaped the benefits of *not* responding to the work-family needs of employees. The "costs" of organizational inaction are "paid" by individuals who suffer from the health consequences of work-life conflict, and a public health care system which pays for their treatment. The purpose of this report, therefore, is to provide a more balanced examination of some of these "**hidden**" costs by exploring the effects of work-life conflict from the multiple perspectives of the various stakeholders, including individual employees, organizations, and governments.

### **Objectives of this report**

This report will frame work-life conflict in terms of its potential costs to the individual, to the organization, and to the health care system. It will address the following specific questions:

1. What are the costs of work-life conflict in terms of:
  - a. The individual employee (work-family overload and interference, depressed mood, perceived stress, "burnout", life satisfaction, and physical health)?
  - b. The employing organization (absenteeism, turnover, performance, job satisfaction, commitment, and quality of work relationships)?
  - c. The American health care system?
2. What is the prevalence of work-life conflict among American employees? Which groups are at particularly high risk for work-life conflict (i.e., how is work-life conflict related to gender, job type, dependant care status)?
3. What are the implications of these costs for the formulation of organizational and public policy?

## **Outline of the report**

This report is divided into eight sections. The first section established the context of the study. Definitions and the theoretical framework used in this analysis are presented in section two. Sources of work, family and work-family stress are identified and discussed in the third section while information on the moderators (i.e. gender, job type, parental status) and consequences (ie. stress, depression, absence) of work-life conflict are presented in sections four and five respectively. Section 6 documents the potential effects of work stress and work-life conflict on the health and well-being of employees. Estimates of the costs of work-life conflict due to absence from work and visits to the physician are presented in Section 7. Relevant conclusions are drawn and recommendations given in Section 8.

### **1. Setting the Context**

A little more than a decade ago the Hudson Institute caught the attention of organizational and government decision-makers with its publication of *Workforce 2000* (Johnston & Packer, 1987), a compelling description of changes in the work world and changes in the demographic profile of today's workers. The report painted a portrait of a new workforce — aging, ethnically diverse, and with growing proportions of women and parents—a portrait which departed radically from images of the male dominated workforce of the past. Although demographers had been tracking these changes for years, *Workforce 2000* awakened policy makers to the risks inherent in ignoring the needs of this new workforce if they were to meet the challenges of the new global economy.

The declining labor pool and skills shortages predicted in the report meant that organizations would be competing for a shrinking number of skilled employees, many of whom would have personal, cultural and family needs that would not be well served by traditional "one-size fits all" human resource policies. Moreover, in a global marketplace, America too would be competing to retain top talent, and would be at risk for a "brain drain" should it be unable to respond to the needs of this diverse workforce.

Recognition of the issues raised in *Workforce 2000* and elsewhere (e.g., Drucker, 1989; Towers Perrin & Hudson Institute, 1991) has prompted policy makers to reexamine antiquated HR policies designed at a time when female workers were a relative minority, and male workers could leave personal and family issues at home. With the advent of the dual-income family, employees of both sexes are now coping with care giving and household responsibilities that were once managed by a stay-at-home spouse. Traditional HR policies which can impose rigid constraints on employees, and promotional practices which reward long work hours at the expense of personal time can generate stress, and detract from the pleasures of parenting and the simple enjoyment of personal life. Increasingly, therefore, researchers, business planners, and government policy makers are turning their attention to the potential adverse effects of work stress and work-life conflict on employee health and productivity.

This section of the report explores the changing needs of both the American workforce and the American health care system. The first part traces historic and anticipated industry and labor force trends that have contributed to the "new world of work", and describes some of the threats this environment may pose to employee health and well-being. The second part outlines some of the recent challenges faced by the American health care system as it strives to maintain a high standard of health care in a climate of constraint. The analysis concludes with a discussion of the implications of these trends for the "health" of employees, organizations and the health care system in general.

## **Changes in the work world**

Dramatic demographic, social and economic changes of the past few decades have led to what has aptly been described as a work and lifestyle "revolution" (Intracope, 1999). The changing profile of the labor force, driven largely by the continuing influx of women and mothers into the labor market, means that many employees have new responsibilities and priorities, and accordingly, new attitudes toward work and the role it should play in their lives. Employers, too, are being forced to reexamine their approach to people management, as competitive pressures drive them to streamline and to demand greater output from a smaller workforce. Following is a brief discussion excerpted from Johnson, Duxbury and Higgins (1997) which describes some of the key factors that have transformed the American workplace.

### **1.1. Population aging**

America's population is aging, influenced largely by the baby boom of the 1950's and early 1960's, followed by the baby bust of the late 1960's and early 1970's. A continuing low rate of fertility has resulted in an age distribution characterized by an overrepresentation of people in their prime working years, and a diminishing pool of young adults aged 15-24. Between 1981 and 1996, the proportion of Americans aged 25-44 increased from 29% of the population to 33%; (Statistics AMERICA, 1997a). Conversely, the proportion of young adults aged 15-24 fell from 19% to 14%.

Fewer Americans aged 15 to 24 means fewer labor force entrants. Forecasts suggest that the shrinking of the labor force entry pool will continue into the next century. Estimates indicate that by the year 2016, this group will have shrunk to 12% of the population. As the pool of traditional labor force entrants declines, forecasts indicate an increased reliance on women, recent immigrants and visible minorities as the primary sources of new labor. Employees in these demographic groups have personal, family, and cultural orientations that may conflict with traditional work cultures and career paths. These trends indicate that work-life conflict is not going to just "go away" as mid-career boomers complete their families and approach retirement age. Instead, work-life conflict may well become even more commonplace.

### 1.1.2 Women in the work force and changing family patterns

The growing involvement of women in the paid labor force represents one of the most significant demographic trends in American society (Ghalam, 1993). Between 1977 and 1996, women's labor force participation rate increased from 43% to 57%, whereas men's participation rate declined from 81% to 74% over the same period. For women with children— especially young children— the growth in labor force participation rates has been even more dramatic. Between 1976 and 1994 (the most recent year for which family composition data are available), the participation rate of women with a youngest child aged 6 to 15 increased from 50% to 70% (Lero, Goelman, Pence, Brockman & Nuttall, 1992; Statistics AMERICA, 1997c). During the same period, the rate for women with a youngest child aged 3 to 5 increased from 41% to 67%, and the rate for mothers of infants and toddlers under age 3 nearly doubled, from 32% in 1976 to 62% in 1994.

Participation rate represents the labor force expressed as a percentage of the total population 15 years of age and over. The participation rate for a particular group (by age, sex, marital status, etc.) is the labor force in that group expressed as a percentage of the population for that group.

As women continue their involvement in the paid labor force, family demographics have shifted accordingly. In 1967, only 34% of two-partner families in America were families in which both spouses worked for pay (Moore, 1990); by 1995 this proportion had increased to 64% (Statistics AMERICA, 1997d). Labor market demand, however, is only one of many factors that have contributed to women's increasing labor force participation. Other contributors to this trend include higher educational attainment among women, greater social acceptance of maternal employment, and not least of all, financial need (Ghalam, 1993; Lero, Brockman, Pence, Goelman & Johnson, 1993).

Recent Statistics suggested that a second income may be necessary in the '90s simply to keep a family from losing ground financially. When adjusted for inflation, the average 1995 pre-tax income of dual-income families was \$69,000 (roughly \$45,000 after tax), virtually unchanged from the 1989 level. Had this family been a single-earner family, however, they would have seen their pre-tax income *fall* over the same period to an average of \$50,000 in 1995, 11% *lower* than in 1989 (Statistics AMERICA, 1997d).

For families with very limited financial resources, a second income may mean the difference between poverty and an adequate standard of living. Statistics indicate that in 1995, 5% of dual-income families were classified as low-income. Without the contribution of the female partner's earnings, the low-income rate would have more than tripled to 18% (Statistics AMERICA, 1997d). This data suggests that the dual-income family today not only allows both men and women to fulfill their personal and professional needs but also provides a critical buffer against financial hardship during precarious economic times. Women work not only because they want to, but, in many cases because they need to.

A second family configuration that is rapidly increasing in prevalence is the lone-parent household. In 1996, 15% of all families in America were lone-parent families, compared to 13% in 1991 (Statistics AMERICA, 1997e). The number of lone-parent families reached 1.1 million in 1996, up 19% from 1991 and 33% from 1986. Although these figures include both male- and female-headed households, lone parenthood is largely the domain of women. In 1996, lone-parent families headed by women outnumbered those headed by men by more than four to one.

Roughly half of female lone parents work for pay. Lone parents in the labor force face considerable challenges in terms of balancing their work and home lives. Like parents in dual-income families, they must cope with the combined demands of their paid work and their domestic responsibilities. Unlike parents in two-partner families, however, they often must do so without the assistance and emotional support of a spouse, and often under the additional burden of financial stress. In 1993 for example, sixty percent of female-led lone-parent families lived below the low-income cutoff (*"Statistics Americas Low Income Cut-offs are used to classify families and unattached individuals into "low income" and "other" groups. Families or individuals are classified as "low income" if they spend, on average, at least 20% more of their pre-tax income than the American average on food, shelter and clothing. The number of people in the family and the size of the urban or rural area where the family resides are also taken into consideration"* - Statistics AMERICA, 1995).

### **1.1.3 Competitive pressures and the push for productivity**

Connected to these social and demographic trends has been an unprecedented rate of environmental change for organizations. Intracope, (2001) describe three environmental forces impinging on today's organization. First is a competitive pressure resulting from a change both in the degree of competition (increasing domestically and internationally), and in the nature of competition (a shift from high-volume, standardized output to specialized "niche" products and services). Second is the rapid proliferation of computer-based technologies, and the upward pressure this growth has placed on employee skills and training needs. Third is the increasing complexity of the regulatory framework governing HR issues, including more stringent standards related to human rights, harassment, gender-neutral workplaces, equity, employment insurance, and health and safety. Combined, these factors have forced American businesses to rethink how they position themselves in the marketplace, how they do business, and especially, how they manage their people.

Many organizations have responded to these pressures by streamlining and moving to flatter, more flexible structures better suited to operating in a rapidly changing and uncertain environment. Such attempts at redesign have often translated to major work force reductions, and a growing need to obtain maximum output from the remaining core of employees.

At a time when technology was supposed to be reducing the work week and freeing up leisure time, a large segment of employees are instead working *longer* hours. American labor force survey data indicate that between 1976 and 1995, the proportion of workers putting in a regular 35-40 hour week fell from 65% to 54%; and the proportion usually working 41 hours or more climbed to 22% from 19% (Statistics USA, 2000).

Data on overtime work reflect a similar trend. In the first quarter of 1999, one fifth of the American workforce—roughly 2 million employees—reported overtime hours. In addition, overtime workers put in fairly long hours over and above their regular week, averaging over 9 extra hours a week. Six in ten of these employees received no pay for these extra hours.

The combination of heavy work demands, long hours, and the anxiety associated with fearing "your job might be next" are likely to impose considerable hardships on today's employees. As expressed by demographer David Foot, the trend toward "leaner and meaner" can often translate into "smaller and angrier", or worse yet, "weaker and frightened" (Foot, 1996,).

Heavy work demands and job security uncertainty have generated an unprecedented level of stress for today's employee (Duxbury and Higgins, 1998). Add to this work stress a growing level of family and financial pressures from the home domain, and you have a recipe for psychological distress and stress-related illness.

#### **1.1.4 Slow corporate response**

Research suggests that American organizations have for some time been aware of the growing level of stress and work-family conflict among employees. A study conducted 10 years ago by the Conference Board of America indicated that 50% of surveyed employers believed that work-family conflict was generating stress for their workers, and a nearly equal proportion of respondents reported morale and recruitment problems.

Some organizations concerned with employee health (as well as "bottom line" effects of stress, such as turnover, absences, and productivity loss) have turned to "family-friendly" work arrangements, such as flextime or telework, to help their employees achieve a better balance. National survey data, however, indicate that employer response has been extremely slow. Estimates indicate that flextime is available to only one in four American workers, compressed work week to less than one in five and fewer than one in ten employees have access to a telework option.

It appears that, from the employer's perspective, the highly visible (monetary) costs of implementing such programs have outweighed their less tangible (social and psychological) benefits. Organizational inertia, therefore, has exacerbated the problem for many workers, who for the most part, have been left on their own to cope with the new realities of the workplace and the evolution of life in general.

#### **1.2 Challenges in the health care system**

American workers and their employers have not been the only ones to suffer the social and financial pressures of the 'new millennium. The last decade has been one of great turbulence for the American health care system as well. Escalating resource costs combined with the need for fiscal restraint have prompted governments to rethink program and policy to seek more efficient ways to finance and deliver health care to Americans (National Forum on Health, 1996). Although an analysis of health care issues is beyond the scope of this report, some

mention of the challenges facing the system seem warranted as a backdrop to the discussion.

### **1.2.1 Health care expenditures**

Although the state of health of the population of America is among the best in the world (as measured in standard indicators of infant mortality rates and life expectancy), it comes at a considerable investment of public funds. Over 70% of health care expenditures in America are financed from public sources, the remainder coming from private sources, such as private insurance premiums and out-of-pocket expenditures. Although the ratio of public to private funds is in fact comparable to the average of industrialized countries, America spends considerably more on health care as expressed in either per capita or GDP terms.

In 1996, America spent roughly \$75 billion for health care, representing, or \$2,513 per person (American Institute for Health Information, 1999). Preliminary data for 1998 suggest an increase to roughly \$80 billion. International comparisons indicate that, as compared to other industrialized countries, America's health expenditures are high- - in per capita terms, it ranks second of 24 countries in terms of expenditures (surpassed only by Switzerland). The relationship, however, between high expenditures and the health status of the population is weak. Japan- - the healthiest country in the world-- spends 3 percentage points *less* of its GDP on health care than does America. Conversely, the U.S., which by some standards is considerably less healthy and trails many industrialized nations on health status indicators, spends 4 percentage points *more* of its GDP on health care. In other words, spending more on health care does not seem to translate into more health (National Forum on Health, 1996). Many factors come into play in the health spending-health status relationship, including the cost of resources.

### **1.3 Implications**

The preceding sections paint a picture of a growing rift between the personal needs of American workers and the responsiveness of their employers. Social trends and demographic forecasts, however, promise that work-lifestyle issues, particularly work and family issues, will continue to figure prominently in the lives of American employees for years to come, as the baby boom generation moves through its senior career years and becomes "sandwiched" between the need to care for children and the need to care for aging parents. And lest we assume work-family issues to be an anomalous by-product of this generation of employees, demographics also remind us that the "echo boom" will be quick on the boomers' heels, reaching employment age in the first half of the next decade (Foot, 1996).

Without greater support for employees and their families, AMERICA can expect to see an ever-increasing level of work-life conflict and stress-related illness. For individuals, the cost is high. Protracted stress and work-life conflict have been linked with depression, anxiety, and "burnout", as well as psychosocially mediated medical conditions, such as cardiovascular and gastrointestinal disorders, allergy, and migraine (Duxbury & Higgins, 1998). For family members, employee stress can mean poor parenting, interference with family relationships, and increased reliance on social and counseling services. For organizations, employee stress and

conflict have been associated with a host of unfavorable work attitudes and behaviors, including increased absence, turnover, and productivity loss (Duxbury & Higgins, 1998).

Employee stress and work-life conflict also pose challenges to America's health care system, should prolonged stress translate to psychological and physical illness. Boomers concentrated in the "full-nest" stage of the life cycle (roughly 30 to 54 years of age) now represent nearly 40% of the population. This represents an extremely large cohort at risk for work-related stress and illness. Given an already high level of health care expenditure, America's ability to cope with a growing proportion of young adults seeking treatment for stress-related illness may be limited.

America's comparative performance in terms of health expenditures and resource use suggest that the quest for greater efficiencies may be on governments' agendas for some time. With limited ability to reduce the *prices* of medical resources, mechanisms which can reduce the *demand* for resources would seem worthwhile investments. In this sense, investigating the potential costs of work-life conflict (and, hence, the potential savings associated with a prevention strategy) seems appropriate.

The next sections of the report take a closer look at the individual and organizational costs of workplace stress and work-life conflict in the context of the theoretical and empirical literature.

## **2. Definitions and Concepts**

"Work-life conflict", as a relatively new concept, has rarely been studied directly in the context of health effects (IntraScope 1999). This section of the report, therefore, will examine work-family conflict under the broader umbrella of stress-response theory. First described by Walter B. Cannon (1929) near the turn of the century, the stress response has been the topic of extensive theoretical and empirical research over the intervening years. An abundant literature is available; therefore, to help understand the mechanisms by which stress and work-life conflict as a subcomponent of stress can manifest itself in ill health.

### **2.1 Definitions**

The word "stress" is in such popular use today that it has come to mean different things to different people. We say that commuting is too much "stress" to bother with, that we work in a "high stress" environment or that public speaking "stresses us out". In these varied contexts, it can be seen that the word "stress" has evolved to refer to both the *source* of some event and the *reaction* to it. Scientifically, however, "stress" refers to the broad domain concerned with how individuals adjust to their environments (Quick et al., 1997). Before looking at a theoretical model, therefore, it is important to first establish a common language by distinguishing among the various components of stress: the *stress response*, *stressors*, and *distress*. Following are some definitions given by Quick:

***Stress Response*** The stress response is the generalized, unconscious mobilization of the body's natural energy resources when confronted with a stressor. It is characterized by a biological activation of the hormonal and sympathetic nervous systems, and is often manifested in elevated heart rate, increased respiration and perspiration, and muscle tightening. All of these actions are designed to prepare the individual to fight or run, hence the description of the stress response as the "fight or flight" response.

***Stressor***: The stressor is the physical or psychological stimulus which generates the stress response. It serves as the trigger for the mind-body activities described above.

***Distress (Strain)*** : Distress (also referred to as "strain") is the *adverse outcome* of the stress response. It refers to the individual's degree of physiological, psychological and behavioral deviation from normal healthy functioning.

"Distress", therefore, is what we generally mean when we talk about experiencing a high level of "stress". It is important to note that not all stress responses are unhealthy. "Healthy" stress responses refer to the moderate level of arousal that is required to increase performance. Stress in its evolutionary context of "fight or flight" is one of humans' best assets for managing legitimate emergencies and achieving peak performance in vital tasks and activities. It is only when the stress response exceeds this optimum level that the load becomes too great and performance is depressed. Recognition that the stress response can be either adaptive or maladaptive leads us to appreciate that "stress is inevitable; *distress* is not".

## **2.2 An ecological model of stress and health**

The stress response is best understood through an ecological approach which examines the whole spectrum of psychological, sociological, and physiological events that make stimulus demands on an individual (Cooper & Davidson, 1987). Figure 1 provides a multifaceted model of the various domains that constitute possible sources of stress (stressors), and subsequent stress outcomes (distress).

According to the model, psychosocial stressors emanate from both work and non-work domains. The individual's response to these stressors is moderated by the individual's genetic "psychobiological program" (i.e., propensity to react), as well as sex, personality factors, and various other variables related to social support, control, and coping.

## **FIGURE 1: An Ecological Model of Stress and Health**

### **Stressors**

- Work Domain
  - Physical Demands
  - Task Demands
  - Work Role Demands
  - Interpersonal Demands
  - Organizational Structure/Culture
- Home Domain
  - Family Structure/Relationships
  - Dependant Care Demands
  - Neighborhood and Community
  - Financial Concerns

### **Individual Stress Response**

- Work-Life Conflict

### **Modifiers**

- Gender
- Job Type

### **Distress Outcomes**

- Individual Outcomes
  - Behavioral
    - Substance Abuse
    - Eating Disorders
    - Violence
  - Psychological
    - Depression
    - Life Satisfaction
    - Perceived Stress
    - Burnout
  - Physical Health
    - Cardiovascular Disease
    - Gastrointestinal Disorders
- Organizational Outcomes
  - Absenteeism
  - Turnover
  - Performance

Job Satisfactions  
Commitment  
Social Support Relationships (Co-workers/managers)  
Control  
Personality/Coping Style

These predisposing, moderating variables may promote "healthy stress" responses, or, conversely, may result in "distress" outcomes in the behavioral, psychological or physical domains. All of these processes take place in a "human-environment ecosystem" (Levi & Lunde-Jensen, 1996), a cybernetic system with multiple feedback loops. Accordingly, distress which has occurred in an individual can feed back into the structures and processes (e.g., at the workplace or in non-work life), affect the individual's next stress response, or alter the modifiers themselves.

An ecosystems approach is especially important in the study of work-life conflict as it highlights the interdependence and bidirectional of the various contributors to stress in an individual's life. In this model, we have positioned work-life conflict at the junction of work and non-work (home) stressors, as it can be viewed as a specific type of stress response triggered by the combined effects of stressors from these two domains. Although stressors from the home domain have been recognized in the occupational stress literature, often the models developed in this literature have relegated personal and family influences to a category such as "extra organizational stressors", or have included them as a subcategory of work-role demands. Such an approach may fail to capture the subtle interactions between work demands, home demands, and the perceived congruence between the two.

The next three sections of the report expand on the stress-response model by discussing in greater detail the stressors, moderators, and outcomes of stress (distress and strain), with particular emphasis on work-life conflict.

### **3. Sources of Stress**

The environmental model introduced in the previous section identified two broad categories of stressors in a worker's environment: those emanating from the work domain, and those from the non-work (home) domain. This section of the report outlines the nature of the potential stressors in each domain, and concludes with a discussion of what may happen "when worlds meet": work-life conflict.

#### **3.1 Stress in the workplace**

Although the stress response is an individualized experience, there are, without a doubt, a wide variety of pressures in today's work settings with the potential to generate adverse stress reactions (distress) for many employees. Following is a brief description of some of the more common sources of stress in the workplace.

### **3.1.1 Physical demands**

Some occupations, by their very nature, are characterized by a high number of stressors emanating from the physical environment. Physical stressors include those normally associated with blue collar occupations, such as heavy lifting, climbing, and exposure to potentially hazardous conditions or substances. Physical stressors are not limited to the non-professional occupations, however. Today, white collar jobs involve a new set of stressors that may also be physically demanding. Computer work is one such stressor, and has been associated with repetitive strain as well as problems related to excessive exposure to video display terminals. Inadequate lighting, noise, and poor indoor air quality are also potential sources of problems in today's work environments.

### **3.1.2 Task demands**

Although we normally tend to equate heavy task demands with stress, the stress response model suggests that tasks demands at either end of the spectrum may be perceived as stressful. Optimal performance is associated with an optimal level of stimulation. Many situations in working life, however, are characterized by either over- or under-stimulation, or worse, both. The last situation can occur when workload is high (e.g., many actions or observations per unit time), but the tasks to perform are so extremely simple as to be almost "an insult to the human brain" (Levi & Lunde-Jensen, 1996, p. 15). Task characteristics can be stressful, therefore, when they demand too little of an employee (such as in mass assembly or keyboarding), or when they demand too much (as in hectic front-line service positions or work requiring continuous technology learning and upgrading).

### **3.1.3 Work role demands**

Whereas task demands are concerned with specific work activities which characterize the job, role factors are related to the behavior others expect of employees as they fulfill their organizational functions. Individuals must fulfill expectations in multiple work roles, simultaneously acting as supervisor, subordinate, team member and friend. These roles may not always be consistent or compatible. Incompatibility may take the form of *role conflict* or *role ambiguity*.

Role conflict occurs when two or more roles cannot be performed simultaneously (such as in a matrixed organization where an individual must satisfy the demands of two or more teams or supervisors). Role ambiguity occurs when there is inadequate, unclear or confusing information about expected role behaviors (due to poor communication of expectations, poor communication of rewards, or ambiguous technical jargon).

### **3.1.4 Interpersonal demands**

Individuals also may encounter work stressors in the form of social, personal, and working relationships. Interpersonal stressors may result from personality differences, team pressures, and differences in leadership styles. In today's workplace, diversity issues have become another source of stress for many, as employees who are different in culture, gender, age, and ability may encounter interpersonal conflict and career barriers.

### **3.1.5 Organizational structure and culture**

As rapidly changing business environments force organizations to "right-size", "down-size", and "delayer" (i.e. downsize at the middle management level of the organization), new pressures are emerging for today's employee. Some of these challenges emanate from the breakdown in the "psychological contract" between employers and employees, which traditionally has afforded employees some degree of latitude in the workplace, as long as they performed their jobs adequately (Duxbury & Higgins, 1998). Today, employees who survive the down-sizing live with the fear that their job, or their entire work unit, may be the next to go. In addition, much of the downsizing has been done without sufficient attention to the structures and processes that remain. As layers, particularly mid-management layers, have been removed, new mechanisms for reward, support, and communication have not always been built into the new systems. As a result, many workers are expected to do the work formally done by two or three employees, often with very limited resources.

IntraScope (2002) provide a list of cultural stressors which are often found in organizations in transition:

- lack of clear job descriptions or chain of command
- absence of recognition of or reward for good performance
- lack of opportunity to voice complaints
- lack of feedback over the finished product
- job insecurity due to short-term contracts, downsizing, and mergers
- concerns related to one's responsibilities for other employees
- the manager cannot adequately supervise the work of his/or her subordinates because they have too many people reporting to them (i.e. too high a span of control)
- chances that a small error or momentary lapse of attention may have serious, or even disastrous, consequences.

### **3.2 Stress at home**

Individuals can find stress in the workplace, or they can take it. Even before the dual-income family became the norm, pressures from the home domain have followed employees to their paid work. Non-work stressors include family structure and the quality of family relationships, dependant care demands, the nature of the community in which one lives, and financial concerns (Johnson, 1997). The home can be a relief from job stress and a sanctuary in which to regenerate, or it can be a source of turmoil (Matteson & Ivan, 1987). Because work and home

are such salient features of every employee's life, it is easy to see how unsatisfactory resolution of problems at home can interact with, and sensitize an individual to, stressors at work.

### **3.2.1 Family structure and family relationships**

Stressors in the family environment include not only discrete "crisis" events, but also long-term patterns of marital and family interaction that can affect the individual's ability to cope with stressful events. Examples of crisis events may include divorce, separation, death, illness of a family member, or a move to a new house or community. Long-term interactive patterns which may affect coping ability include the quality of marital and parent-child relationships, the nature of decision-making and problem solving, and the existence of abusive relationships and behavioral problems. Stressors may also arise over time from significant changes in family roles and relationships associated with life-cycle stages, such as the transition to parenthood; and the "empty nest" period.

### **3.2.2 Dependant care demands**

The number and ages of children in the family is a significant determinant of the level of stressors in the home. Both large numbers of children and the presence of very young children in the home have been associated with family role strain. Similarly, the need to care for aging parents or other elderly relatives is becoming a reality for many employees today, leaving many in the so-called "sandwich generation" with responsibility for the care of both children and parents (Duxbury & Higgins, 1998).

### **3.2.3 Neighborhood and community**

Although neighbors and community provide an important means of social support, they also can increase the level of stressors in an individual's home environment (Johnson, 1997). Neighborhoods differ in the level of service they offer to individuals, such as access to recreation, shopping and entertainment facilities, or the availability of counseling services. They also differ in terms of orderliness, natural beauty, cleanliness, safety, transportation, and road. Rural life poses unique challenges, including not only a lower level of family-related services, but also the very practical time demands for employees who need to commute to urban centers (Duxbury & Higgins, 1998).

### **3.2.4 Financial concerns**

Given the rising cost of living over the past decade with no connected increase in real family income, financial worries are a reality for many families today. As discussed in Section 1, in many instances, two incomes are necessary just to make ends meet. Financial hardship can be an ongoing stressor when individuals must face the challenges of providing for a family in uncertain economic times. In addition, the lack of monetary resources greatly reduces the coping options available to individuals in almost any stressful transaction as it can limit access to legal, medical, financial, or other professional assistance (Lazarus & Folkman, 1999).

Money conspires to antagonize couples. It sometimes invites divorce. And though finances have always raised tensions for couples, it may be harder than ever these days to avoid conflict.

That's because today's range of family complications — moms leaving and re-entering the workforce, late marriages that bring debt and adult children, shrinking pensions and baffling health care choices — are demanding ever-more financial decisions from couples who can't even agree on whether the house is warm or cold.

According to the U.S. Department of Labor, childcare is among the most pressing concerns of today's economy. In 1997, 29.1 million U.S. families, or 41 percent, had children under the age of 14. In more than half of these cases, either both parents worked or a single working woman controlled the family finances.

### **Financial Worry Related to Childcare**

Recognizing the importance of childcare in this country, President Clinton introduced in 1998 the U.S. Department of Labor's Business-to-Business Mentoring Initiative on Childcare. The initiative aims to increase awareness among industry leaders that safe and affordable childcare is a top concern for many employees. The initiative also attempts to create connections between employers considering offering onsite childcare with employers that already have such programs in place.

Many parents' value on-site childcare facilities, but not enough employers realize the bottom line benefits involved. Providing childcare and other family-friendly company policies helps employers both attract and retain quality professionals. Furthermore, companies with childcare facilities usually have increased productivity, reduced absenteeism, and higher company loyalty. In other words, onsite childcare facilities are generally as good for business as they are for workers.

Nearly half of working families and mothers who are able to find child care rely on family members, including parents and other relatives. The rest arrange for care through private providers. Parents often face steep costs and questionable quality of care.

Child care expenses can range anywhere from \$4,000 to \$10,000 a year per child.<sup>7</sup> This expense can be prohibitive for lower and middle class families. One third of families with young children earn less than \$25,000 per year and a family of two adults working full time on minimum wage salaries earns a combined income of only \$21,000 a year.<sup>8</sup> In 1997, the median annual income of the average female-headed household was \$17,256.<sup>9</sup> At such earning levels, child care expenses can easily consume one third or more of the household budget.

Child care affordability is a particularly challenging barrier to welfare recipients seeking to enter the workforce. Under the Temporary Assistance for Needy Families (TANF) program, states may not sanction parents by terminating their welfare benefits if they have preschool age children (6 years old or younger) if they are able to verify that they are unable to obtain child

certain that all states clearly convey this information to recipients. Parents may also have difficulty obtaining quality care near their homes or work that meet their scheduling requirements.

### **Financial Worry Related to Work Performance**

Americans' attitude toward debt has changed dramatically in the past two decades, from embarrassment to acceptance. Many people now see debt as simply part of modern life.

Two results of this change of heart are the lowest personal savings rate since the Great Depression—in January 2006 it dropped to minus 0.7 percent—and a penchant for using credit cards. More than half of workers surveyed by the Employment Benefit Research Institute for its "2005 Retirement Confidence Survey" say they carry credit card debt month-to-month.

Despite its social acceptability, debt problems cause stress and anxiety that sap workers' productivity, induce health problems and increase the likelihood they will leave a job in search of better pay.

"They are absent more frequently and waste time at work dealing with financial matters—on the telephone with creditors, trying to get a loan from their 401(k)".

Workers who are deeply stressed financially may not be as effective as their more secure counterparts. They may have more accidents, or they may be more susceptible to theft or bribery.

When wage earners of any stripe are facing difficult choices their judgment could be impaired. Wage earners, especially men, will take extraordinary risks to protect and provide for their families. America have a system that elevates the risk for people to make ends meet and people who are caught up in this are merely responding in a predictable way. The one sided financial relationships that's been created by collusion between all manner of financial institutions and government has had a broad impact upon wage earners and has demonstrably harmed the country's middle class. What the principals have failed to appreciate all along is the working class men and women of this country represent the goose that lays the golden eggs. Basically, the principals have harmed the goose without much thought or care for the idea it isn't an unlimited resource. In the simplest of terms, desperate people, seeking only the fundamentals, will do whatever is necessary to provide for their families.

### **Wages VS. Cost of Living**

#### **Wayne Yada, Premier Color Graphics**

"Due to the nature of our business, we have virtually no one on our payroll being paid minimum wage. Therefore, even with a \$1 increase, our payroll will not be affected by an increase in the minimum wage. However to say that our business will not be affected by a minimum-wage increase would be like saying that the increase in gasoline prices has no affect on businesses that do not have company vehicles. The trickle-down effect is real. If it costs our

employees, vendors and customers more money to buy meals for their families at fast-food restaurants for example, then their buying power will have diminished, and they will be looking for more money from us either through higher wages [employees], higher prices of goods sold to us [vendors], or buying less from us [customers]."

**Dan Olinger, Peninsula Messenger Service of Central California Inc.**

"I'm really torn on the subject because minimum wage is like an entry level wage for trainees, not a living wage. But I do know that for a lot of people, that's all they can get. We usually start our employees at \$2 above minimum wage and most people get a raise here after 90 days. An increase in the minimum wage probably would impact what we would have to charge customers for our services because it would force us to more closely examine our pay scale for our other employees."

**Keith Watkins, Tulare County Farm Bureau**

"An increase in the minimum wage will increase our cost of production. Roughly the first 50 cents will increase our labor costs by 10 percent and the next 50 cents will increase them by another 9 percent. When you consider that labor costs are about 30 percent of the cost of producing our product, that's a pretty substantial increase in our operating costs. And although we'd like to pass it onto consumers, we're price takers not price setters, so conceivably the costs could all be taken on by growers."

**Alicia Sundstrom, Financial Credit Network**

"I think the question we have to ask is when does it stop? I am so torn between families that can't afford to live with all of the increases we have experienced as consumers in California ... and my employer's perspective... In our industry, wages are the largest monthly expense. With a finite margin it is difficult, if not impossible, in the competitive climate today to increase the rates we charge our clients. At the same time, even with technology, I can't provide the level of service our clientele requires with fewer employees. California is creating a climate that is not conducive to making a profit."

**David Miller, Pacific Employers in Visalia**

"The fact is, a minimum wage increase is certainly the precursor for the next round of inflation. Those people who suggest we need to help minimum-wage earners by bringing them up are mistaken as that is not what will take place. All essential employees, all along the food chain, will get an increase; some mandated, and some by "peer pressure." Those who are, at this instant, not fully worth the new higher minimum, will not be working. That includes those who would be entering the work force and those who are currently employed. Salaried exempt supervisors, for example, who by law are paid at least twice the minimum wage, will get a \$4,160 annual increase in their wages when the minimum wage goes up \$1. On the other hand, people who are currently only marginally employable, such as unskilled high school students or dropouts, will simply not be employed. The greater problem is that the higher cost all employers will bear will result in price increases throughout the marketplace. Those least able to pay it will also be forced to pay the new rates."

### **3.3 Stress at the interface: Work-life conflict**

The distinction between the demands of workplace and the demands of home is conceptual, and in many ways, artificial (Quick et al., 1997). Work and home life are a feature of everyday life and so closely meshed that it is nearly impossible to tease out one or the other as the source of any given stress response (i.e., is the family a source of distress at work, or is work a source of distress in family relationships?). The two domains interact so strongly that a circular relationship prevails (Matteson & Ivan). Moreover, conditions in work and family domains may or may not be highly stressful when considered alone, but their *joint* occurrence is apt to produce distress, suggesting an additive effect (Frone, Russell & Cooper, 1999).

It is perhaps the awareness of this additive relationship that has given rise to the increasing interest in work-life conflict as a separate construct. What may be most important in the study of work-life and health outcomes is not so much in which of the two domains a stressor originates, but what happens "when worlds collide".

Work-life conflict occurs when the demands of work and non-work life are incompatible in some respect so that participation in either role is made more difficult by participation in the other role (IntraScope, 1998). It can emanate from two aspects of the work-life interface: factors associated with the time required to perform work and non-work roles, and the psychological spillover of gratification (or distress) from one role domain to the other. Since most often work and family duties are performed in separate locations, individuals are generally *physically* unavailable to perform both sets of duties simultaneously. The "spillover" effect means that individuals may also encounter *psychological* unavailability if the energy required for the performance of one role depletes the energy required to perform the other role. In this sense, then, work-life conflict can be seen to have two major components: the practical aspects associated with time crunches and scheduling conflicts, and the perceptual aspect of feeling overwhelmed or overloaded by the pressures of multiple roles.

The remainder of this section briefly outlines some of the factors that might be considered to be "interface" stressors. Although some of these factors also might rightly be classified as characteristics of "work" or "family", they heavily rely on interplay between the two domains.

#### **3.3.1 Amount and scheduling of work time**

Work is the cornerstone around which other activities must be made to fit (Duxbury & Higgins, 1998). Time spent in the work role is necessarily unavailable for family, education, leisure, or community. The scheduling of work hours also contributes to conflict when evening or weekend work prevents employees from being available for family activities which occur at specific times.

### **3.3.2 Division of family labor**

The time crunch associated with combined work and family roles is dependent not only on hours in paid work, but also on the distribution of domestic work (including the care of the children) within the home. Research suggests that although women have made strides in the workplace, the division of labor at home falls along pretty traditional lines. In terms of the actual time spent in various roles, men generally spend more time in the paid work role, and women spend more time in family roles (Galinsky, 1986). When combined, however, women spend more of their time working (paid work plus domestic work) than do men. In addition, women retain primary responsibility for overseeing household work, regardless of who carries out the task (Barnett & Baruch, 1983; Duxbury & Higgins, 1998). These patterns suggest that women are more likely than men to encounter stressors from this aspect of the work-family interface. Not only do they devote longer hours to their combined work roles (the *physical* aspect of work-family conflict), they also retain the responsibility for seeing that the work gets done (the *psychological* aspect of conflict).

### **3.3.3 Child and elder care demands**

Although dependant care responsibilities impinge on individuals who are not in the workforce, the presence of children or elderly dependants raises a unique stressor for employed parents: the need to arrange alternate care to cover work hours. In 1988 (the most recent year for which national data are available), fully half of employed parents in AMERICA reported difficulties finding or maintaining appropriate child care (Lero & Johnson, 1994). A Conference Board of America study conducted in the same year indicated that one third of employees who provided care to both children and elderly family members (i.e. members of the sandwich generation) found it very difficult to balance paid work and home responsibilities. The need to arrange care (and in many cases orchestrate multiple child and elder care arrangements!) provides a considerable source of stress for many employees, and is a good example of the "greater than additive" effect of stressors at the interface of home and work life. While no national data could be found indicating what percent of American workers are presently in the sandwich generation, recent work in Saskatchewan (Duxbury and Higgins, 1998) indicate that approximately 20% of employees in that region spend time each week looking after children as well as elderly dependents. This percent can be expected to increase as the parents of the baby-boomers age.

## **4. Moderators of Work-Life Conflict and The Stress Response**

This section of the report briefly outlines some of the potential modifiers of work-life conflict. This list is by no means exhaustive, but it is intended to provide readers with an overview of some of the key factors that have been identified in the literature as moderating the perception of conflict at the work-family interface. An understanding of these modifiers is critical if we are to identify individuals who may be at greatest risk for conflict and stress-related health disorders.

#### 4.4 Personality and coping style

Individuals differ not only in the environments they encounter, but also in their ability to cope with stressful events. Coping has been described as the adaptation techniques used by an individual to master a major psychological threat and its attendant negative feelings. Coping style has received considerable attention in the stress-health literature, and has been associated with various personality characteristics, including tolerance for ambiguity, introversion-extraversion and the presence of "Type A" response patterns (i.e., harried and competitive, and high on aggression and hostility; Howard, Cunningham & Rechnittzer, 1976).

Coping style has not been directly explored in the context of work-life conflict. Its importance to the stress response, however, indicates that it may also be a critical determinant of perceived conflict in the work-life arena. Work-life conflict is largely a perceptual phenomenon, describing an individual's *understanding* of potentially competing environmental demands. Since coping refers to the process by which an individual *appraises* a stressful situation and decides among alternative strategies to manage it (Lazarus & Folkman, 1984), its role as a mediator in appraising work-life conflicts is apparent.

#### 4.5 Control

Closely related to coping style is the individual's perceived ability to control stressful events. Control is defined as the belief that one can exert some influence over the environment, either directly or indirectly, so that the environment becomes more rewarding or less threatening. Control over the work environment has been identified as a critical factor in reducing adverse stress responses, and in improving psychological and physical health outcomes .

Research work by IntraScope (1999) has suggested that an employee's level of distress (which he refers to as job "strain") is a function of both work demands and the perceived level of control the employee has over these demands. According to IntraScope, it is not the psychological demands of work, including time pressures and heavy output demands that pose the greatest health risk. Instead, the primary work-related risk factor appears to be lack of control over how one meets these job demands and how one uses one's skills maintains that, demanding jobs only pose a health risk when they occur in combination conditions of low job control.

IntraScope developed a well-known model (Figure 2) to illustrate the relationships between control, demand, and distress or job strain. According to this model, two conditions are associated with distress. The most distressing condition ("high strain") occurs when high job demands are combined with low control (lower left quadrant of the model). High job strain, he claims, is typical of such occupations as waiter, assembly line worker, and keypuncher, where a high level of output is demanded, but employees have little or no decision latitude as to how the job is performed (IntraScope notes that high strain jobs are very often those in which there is a disproportionate number of women). The second most distressing condition occurs when control is low, but so are work demands (lower right quadrant). These jobs IntraScope labels as "passive", as they are typically those which require little more than routine responses to the environment, such as the jobs held by billing clerks, janitors and security guards.

**Figure 2: IntraScope's Demand-Control Model (IntraScope, 1999)**

		<b>Demands</b>	
		<b>High</b>	<b>Low</b>
<b>Control</b>	<b>High</b>	Moderate Strain	Low Strain
	<b>Low</b>	High Strain	Mod-High Strain

IntraScope's demand-control model has implications for the study of work-life conflict. It implies that the ability to balance work and non-work life may be enhanced in instances where individuals are able to exert some control over either the work environment or the home environment, or at the interface. For example, perceived control over the work environment may be obtained when individuals have the autonomy to decide how to approach their work tasks or what resources they will draw on to complete them. At home, individual control is obtained through a strong family support network, or through having adequate financial resources to purchase services (Barnett & Baruch, 1987). At the interface of work and family, flexibility in work time (such as the ability to work a compressed work schedule), or in work place (for example, telework) may buffer the effects of work-life conflict. Thus, the relationships between work and family stressors and perceived work-life conflict should be weaker for employees with high control and stronger for those with low control.

#### **4.6 Summary**

This section of the report has presented a brief overview of some of the potential moderators of work-life conflict. Although, for clarity, these moderators have been discussed as discrete and independent constructs, the ecological model presented in Figure 1 reminds us that in everyday life these factors are overlapping and highly interrelated. Gender, for example, may affect the perception of work-family conflict directly if it implies a sex-linked hormonal predisposition. It may also contribute to work-family conflict indirectly by increasing the probability that an individual is employed in a high strain job such as clerical work or keypunching (IntraScope, 1999; 2002).

This discussion has also treated these variables as if they exert their influence only at the work-life junction (i.e., at the point of the "individual response" in Figure 1). Again, this depiction of moderators is oversimplified. Moderators can exert their influence at any point in the chain from stressor to health outcome. Recognition of the interconnectedness of the moderators of work-life conflict is essential in both the identification of high risk individuals, and in designing prevention and intervention strategies (for example, a preventive approach might strive to eliminate the stressors, change the way that stressors are appraised by the individual, or might promote social support and control as "buffers" against stressor exposure).

As concluded by Matteson & Ivancevich (1987):

*"It is impossible to overstate the importance of individual differences. In a very real sense, it is not stressors that produce stress; what produces stress is the significance, meaning, and interpretation that individuals assign to stressors. And that interpretation is what it is because of individual differences" (p. 91).*

Fundamental individual differences, therefore, contribute greatly to the variability in employee responses to work and family environments. The host of behavioural, psychological, physical, and organizational outcomes that are associated with work stress and work-family conflict are the topic of the next section.

## **5. Outcomes of Work – Life Conflict and the Stress Response**

As illustrated in the ecological model, distress can manifest at the level of the individual employee in terms of a variety of adverse behavioral, psychological, and physical reactions. Individual distress can also have unfavorable consequences at the organizational level, ranging from the direct costs of preventable accidents and stress-related work absences to the somewhat less tangible effects on job satisfaction and other employee work attitudes.

This section of the report provides a brief overview of some of these consequences of the stress response. The following summary, therefore, is organized so that each outcome is explored first in the broader context of work stress, followed by an overview of available research specifically in the work-life domain.

### **5.1 Individual outcomes**

The manifestation of distress at the individual level can be divided into three classes: observable behavioral consequences, such as changes in eating, smoking, or drinking behaviors; psychological consequences, including depression and burnout; and physical health consequences, most often those associated with cardiovascular disease and gastrointestinal disorders.

#### **5.1.1 Behavioral consequences**

Workplace stress has been identified as a major contributing factor to a wide range of adverse behaviors, including increased cigarette smoking, the abuse of alcohol and other drugs, accident proneness, violent behavior, and eating disorders. Very little research has been done specifically on the behavioral consequences of work-life conflict, but research has strongly suggested a connection with increased alcohol consumption.

Although a thorough review of this research is beyond the scope of this paper, two observations relevant to health costs should be made. First, when distress is manifested as an overt behavior (as opposed to an internalized response, such as depression), the effects extend well beyond the

individual. For example, not only has work-related stress been linked to an increased incidence of industrial accidents, it also has been shown to increase the likelihood of automobile and domestic accidents. In addition, abusive behaviors, such as alcoholism and violence, have obvious implications for the well-being of others in the individual's work and family environments. These "ripple" effects imply much higher social and economic costs than are apparent when the individual is the sole unit of analysis. Second, the behaviors themselves become risk factors for physical illness, as is the case with smoking and coronary heart disease, or alcoholism and cirrhosis.

### **5.1.2 Psychological consequences**

Although often viewed as "personal" problems that can be resolved by the individual employee, emotional disorders and psychiatric illness place a considerable burden on the American health care system. In 1993, America spent over \$5 billion to treat individuals with some form of mental illness. This represented 11% of the direct costs (*Direct costs include the costs of hospital care, drugs, research, and medical services provided by a physician.*) of treating all illnesses in AMERICA, second only to expenditures on cardiovascular disease (Ibid.). Workplace stress has been identified as a significant contributor to reduced psychological functioning, and the psychological effects of workplace stress have been well documented (for a review, see Quick et al., 1997). Among the problems associated with distress is depression, reduced life satisfaction, perceived stress (*As is the case in everyday usage, the term "stress" has had a variety of connotations in the literature. Many authors have used it synonymously with "distress" to refer only to the stress response. To be consistent with the literature, in this section we use the term "perceived stress" to refer to a set of maladaptive responses to stressors (e.g., feeling irritated, nervous, unable to cope), and "burnout"*).

#### **5.1.2.1 Depression**

Depressed mood is defined as a state characterized by low energy and persistent feelings of helplessness and hopelessness (Duxbury & Higgins, 1998). In 1995, over 1.5 million Americans sought treatment for depression (Statistics AMERICA, 1999a). Depression represents the single most common psychological condition seen by the family physician (Quick et al., 1997). It is estimated that depression is two to three times more prevalent among women than among men (Matteson & Ivancevich, 1987).

Although it is suggested that depression has a genetic or biological component, environmental stressors are believed to trigger it (Davison & Neale, 1978). Psychological theory maintains that depression emanates from feelings of personal helplessness in the face of persistent and uncontrollable stressors (Seligman, 1974). Seligman's theory of "learned helplessness" can be seen to closely resemble IntraScope's (1979) control model of workplace strain discussed in Section 4.5. Both psychological and organizational theory, therefore, implicate high stress-low control work settings in the etiology of depression.

The potential contribution of chronic stressors to the etiology of depression has received very little attention in the work stress literature (Matteson & Ivancevich, 1987). The few existing studies have looked primarily at gender differences (e.g., Dohrenwend, Krasnoff, Askensay & Dohrenwend, 1978; Jick & Mitz, 1985), and, consistent with national incidence data, find depression rates for women to be two to three times higher than those for men.

Given the persistent, and often irreconcilable, time demands of the work and family roles, it is not surprising that work-life conflict has been shown to be a significant contributor to depressed mood (Burden & Googins, 1987; Duxbury et al., 1991; Frone, Russell, & Cooper, 1992; Frone, Russell, & Cooper, 1997; Higgins et al., 1992; Thomas & Ganster, 1995). Consistent with IntraScope's and Seligman's work, control over the work-family interface has been shown to significantly reduce the likelihood of depressive symptomatology (Thomas & Ganster, 1995).

#### **5.1.2.2 Life satisfaction**

In contrast to other health outcomes, life satisfaction has not been studied in the context of work-related stress, but has received some attention in the work-life literature. Work-life researchers reason that, because of the interactive and reciprocal nature of the relationships between work and family domains, work-related role stress might combine with work-family demands to exert considerable influence on an employee's overall perception of life satisfaction (Bedeian et al., 1988). Further, it is assumed that improvements in the quality of work-life (e.g., increased work-time or work-location flexibility) will produce corresponding improvements in the quality of life as it makes it easier for employees to reduce the strains of managing the modern family (Duxbury & Higgins, 1998). Generally, the research has supported these contentions. High work-life conflict has consistently been associated with a reduction in overall life satisfaction (Aryee, 1992; Bedeian et al., 1988; Duxbury & Higgins, 1998; Rice, Frone & McFarlin, 1992).

#### **5.1.2.3 Perceived stress**

Perceived stress refers to the extent to which one perceives one's situation to be uncontrollable and burdensome. Individuals who report high levels of perceived stress generally are manifesting the symptoms we associate with "*distress*", including nervousness, frustration, irritability, and generalized anxiety. Perceived stress has been linked to job dissatisfaction, depressed feelings, work absence, and turnover. It is highest among women, especially those working in service occupations (Wilkins & Beaudet, 1998). Perceptions of stress have been shown to be particularly high among employees who have difficulty balancing work and non-work demands (Duxbury et al., 1991; Higgins et al., 1992; Lero & Johnson, 1994; MacBride-King, 1990; Williams & Alliger, 1994).

#### **5.1.2.4 Burnout**

Burnout is a concept which dates to the late 1970s, and is characterized as a state of physical, emotional, and mental exhaustion. It is most commonly associated with "white collar professions" (IntraScope, 1990) which combine a high level of interpersonal involvement with exposure to emotionally demanding situations. Such situations are prevalent particularly in the human services professions and in public service and managerial positions where clients impose constant demands for attention (Duxbury & Higgins, 1998). Burnout is closely linked to depression, and research has shown that, like depression, burnout is most common in high-demand, low control work settings (IntraScope, 1990). In addition to its draining effect on individuals, burnout is strongly correlated with unfavorable organizational outcomes, including reduced job satisfaction and increased job conflict (Duxbury & Higgins, 1998).

Chronic daily stressors, rather than unique critical life events, are regarded as central factors in generating burnout (Duxbury & Higgins, 1998). Given the persistent time demands on employees who are trying to juggle competing work and family responsibilities, it is not surprising that burnout has been significantly associated with work-life conflict.

#### **5.1.3 Physical health consequences**

Although the behavioral and psychological effects of work-related stress are themselves immense, they may in turn have a potentially more devastating effect on an individual's medical health. The physical health consequences of distress appear to result from the frequent or intense arousal of the stress response, particularly the psychological arousal that is induced by repeated exposure to stressors. It is believed that, with prolonged exposure to stressors, chronic arousal of the sympathetic and endocrine systems may contribute to the development of more serious medical conditions (Matteson & Ivan, 1994), including cardiovascular disease (e.g., heart attack, hypertension, stroke, migraine), gastrointestinal disorders (e.g., peptic ulcer, arthritis, allergy, skin disease, and backpain;). In fact, these physical disorders are so closely related to distress that Selye labelled them the "diseases of adaptation" (Selye, 1976b). Following is a summary of the literature on the physical effects of work-related stress in general, and work-life conflict in particular.

##### **5.1.3.1 Cardiovascular disease**

Perhaps the most frequently studied medical condition in the work stress literature is cardiovascular disease (CVD). Distress causes changes in almost every aspect of cardiovascular functioning, so it is directly involved in the etiology of most CVD states (Matteson & Ivan, 1987). CVD has several manifestations, all characterized by an interruption in the flow of blood within the system. Included in the CVD category are hypertension (high blood pressure), cardiovascular accidents (stroke), myocardial infarctions (heart attack), metabolic necrosis (death of the heart muscle), and arrhythmia. Distress is also believed to contribute to peripheral vascular diseases, such as migraine (Matteson & Ivan, 1997).

### **5.1.3.2 Gastrointestinal disorders**

Another purported consequence of stress is gastrointestinal (GI) disorder (Matteson & Ivan, 1997). GI problems include anything from repeated episodes of heartburn to peptic ulcer. In 1995, GI-related health problems accounted for 32 million physician visits in America, representing 12% of all visits. It is estimated that in 1993, \$3.3 billion was spent to treat digestive diseases, representing 8% of the direct costs of all illness in America.

### **5.1.4 Summary of individual consequences of work-life conflict and the stress response**

Individual response to stressors in the work and work-life environments can be seen to take a wide variety of forms. The preceding review suggests that there is strong correlation evidence that work-related stress and work-life conflict manifest in psychological symptoms of some magnitude. Causal connections to these and more serious medical problems, however, remain difficult to demonstrate. As was discussed in Section 4, there is such individual variation with regard to stressors, stress, and consequences, and so many intervening variables that it may be virtually impossible to forge the links necessary to claim that distress "causes" mental and physical illness.

## **5.2 Organizational Outcomes**

Problems with work-related stress and work-life conflict affect not only individual employees, but also their employers. Both organizations and individuals benefit from an optimum level of stress, and both pay a price for mismanaged stress and distress (Quick et al., 1997). The consequences of an optimal "healthy" level of stress in organizations include high performance and vitality. The unhealthy consequences of excessive or mismanaged stress take the form of "organizational distress".

Signs of organizational distress range from increased absence and turnover due to illness and the inability to manage work-related stress to decrements in job satisfaction, commitment and productivity (Duxbury, 1991; Higgins, 1992). Some of these consequences are quantifiable in dollars and cents (e.g., time lost due to illness); others are somewhat less tangible, and are primarily those which reflect deterioration in employee attitudes toward their work and the employing organization (e.g., reduced job satisfaction and employee commitment). IntraScope (2004) have compiled a summary of potential organizational consequences of work-related stress, dividing them into "direct costs", and "indirect costs" (Figure 3). Direct costs include the loss of an individual through absence or turnover; and productivity declines while in the workplace. "Indirect" costs reflect the "intangibles": loss of organizational vitality, and deterioration in the quality of work relationships.

### **Figure 3: Costs of organizational distress (adapted from IntraScope 2004)**

#### **Direct Costs**

Participation and membership

- absenteeism
- turnover
- strikes/work stoppages
- performance on the job
- quality/quantity of output
- accidents

### **Indirect Costs**

- Loss of vitality
  - job dissatisfaction
  - low commitment
- Reduced quality of relationships
  - distrust
  - animosity
  - aggressiveness

The remainder of this section looks at some of these consequences in more detail. As in Section 5.1, outcomes related to work stress in general will be discussed first, followed by relevant information on outcomes from work-life.

### **5.2.1 Direct costs**

#### **5.2.1.1 Absenteeism**

In 1997, full-time employees in America missed an average of 7.4 days from work, representing an estimated loss of 66 million workdays (IntraScope, 1998). A rudimentary calculation based on average daily earnings of \$135 (*Interpolated from 1996 average annual worker earnings of \$37,000 (Statistics America, Catalogue 13-217XPB).*), suggests that absenteeism may cost American organizations as much as \$8.9 billion annually. Since it has been estimated that work absences in America can cost an organization 1.75 times the absent worker's wage rate (May, 1987), the total costs to employers may be substantially greater than this estimate suggests.

It is difficult to estimate what proportion of this lost work time is attributable to employee work stress per se. American and UK estimates suggest as much as 50% of absenteeism may be in some way stress related (Cooper, Liukkonen, & Cartwright, 1996; Elkin & Rosch, 1990). Statistics indicate that employees who report exposure to excessive life demands miss 30% more work time than is the average (calculated from Text Table 6-B, Statistics AMERICA, 1994).

The strong relationships between work stress and physical illness discussed in Section 5.1 suggest that the effect of work stress on work absence may be rather indirect, and hence, more difficult to measure: adverse stress responses may increase the risk of illness, which in turn,

increases the rate of absence. Determining the contribution of stress to absence is further complicated by the fact that factors other than stress and illness may contribute to absence rates. Absenteeism even during stressful conditions may reflect market opportunities more than the consequences of stress itself (i.e., during economic downturns, employees feel too insecure to risk being absent even when ill). This phenomenon led to coining the term, "presenteeism", to draw attention to the potential productivity loss incurred when people come to work in spite of not feeling well!

In contrast to some of the difficulties inherent in linking absenteeism to work stress, researchers have had somewhat more success in demonstrating its relationship to work-life conflict. Although work-life conflict may contribute indirectly to illness absence due to the stresses of balancing work and non-work life, often it leads directly to absences that are *not* illness-related. Such is the case when an employee takes time to accompany a child to a sports event, or to care for a sick child or elderly parent. In these cases, researchers can ask employees how many days they were absent for reasons other than illness.

Researchers have expanded its labor force survey to collect data on reasons for absence. National data indicate that in 1997, 1.2 of the 7.4 days lost per employee was due to personal or family responsibilities. Applying the average earnings calculation used earlier, a conservative estimate of the cost to American organizations of time lost for personal and family reasons is roughly \$1.4 billion. Add to this the costs of illness absence that may have been indirectly attributable to work-family stressors (see section seven of this report), and the cost to American organizations is substantial.

Absence data collected through self-report measures, however, are subject to bias due to under-reporting. This is particularly so when employees are asked to estimate time lost due to reasons other than illness, as employees are understandably reluctant to disclose this information (Galinsky, Freedman & Hernandez, 1991). In addition, it has been found that employees who are reluctant to disclose child care problems often use their own sick days to stay home with their children (MacBride-King, 1990). This suggests that the proportion of absences categorized as personal illness may be inflated by the inclusion of days off for family.

The problem of under-reporting family-related absence is avoided in other approaches to studying work-life conflict. One such approach is to collect data on all work absences, and then correlate the number of absences with various demographic and psychological indicators collected through survey. For example, the Conference Board in a study of 7,000 employees across America correlated days absent with the age of the children of the family, and found that absences for parents of children under 13 were significantly higher than those for non-parents or parents of teen-agers. "Dual-caregivers" (those with responsibility for the care of both children and other dependants) had the highest rates of absence of any group.

### **5.2.1.2 Turnover**

Although a certain level of turnover is essential to organizational vitality, the costs associated with replacement mean most organizations strive to keep turnover to a minimum. The cost of

turnover includes not only the obvious loss of the productivity of the qualified employee, but also the hidden costs of recruiting, hiring, and training a replacement (MacBride-King, 1990). Estimates indicate that the ratio of turnover costs to annual salary ranges from 1.2 to 2, with the average at about 1.5 (Robbins, 1993). The range reflects differences in position level, organizational function, and relocation costs. Using the American average annual earnings figure of \$37,000 the loss of even one employee at an "average" level in the organization, can cost an employer \$55,000. This cost increases when professional employees in the knowledge sector leave the organization (i.e. higher salaries, greater recruitment and replacement costs).

As expected, research has linked work-related stress and burnout to increased turnover (IntraScope, 2000). Work has also been done in the context of work-life conflict. In the Conference Board study, 12% of American employees said they had left a previous employer due to family responsibilities; 14% had considered leaving their current employer. Women were about four times (20%) more likely than men (6%) to report having left a previous employer for this reason. Recent research with American employees indicated that 30% of employees with high work-family conflict would consider leaving their jobs for one with a better "balance", compared to only 4% of a low conflict group. The authors caution that high turnover is a particular threat to organizational health, as the employees who leave are those who are most "marketable", and accordingly, are those with skills the employer can least afford to lose.

#### **5.2.1.4 Performance**

There is a considerable body of literature to suggest that lifestyle deprivation is associated with work-related stress and is a major contributor to accidents and performance decrements. Although much of this literature is beyond the scope of this paper, it should be noted that distress due to work-life conflict and lifestyle deprivation may well have similar effects if individuals who are overextended trying to balance work and family demands are fatigued or preoccupied on the job.

Work-life researchers have typically explored employee performance by using a measure of employees' perceived productivity (Duxbury & Higgins, 1998; MacBride-King, 1990). This approach uses survey format to ask employees to what extent their personal and family obligations have interfered with their work. MacBride-King (1990) found that roughly half of American employees with dependant care responsibilities had difficulty taking on extra work projects, working overtime, traveling and relocating, and attending meetings or courses after work hours. Nearly half also reported an inability to concentrate on the job due to family obligations. Women were significantly more likely than men to report problems in all of these areas. Although no attempt has been made to assign a dollar value to these types of problems, these findings suggest a high productivity cost for American employers (in addition to the high cost to individual employees in terms of reduced career progress and satisfaction!)

## **5.2.2 Indirect costs**

### **5.2.2.1 Job satisfaction**

The organizational costs of a low level of employee satisfaction are much more difficult to measure than some of the previously discussed outcomes. The consequences to employers appear to be indirect: job satisfaction has been shown to be associated with increased absenteeism and turnover (Robbins, 1993), suggesting that the ultimate cost of job dissatisfaction will be the costs associated with these withdrawal behaviors. Robbins (1993), however, argues that an often overlooked dimension of job satisfaction is its relationship to employee health. He reviews research that demonstrates that employees who are satisfied with their jobs live longer and are less prone to health setbacks ranging from headaches to heart disease. He concludes that job dissatisfaction is itself a source of work-related stress, which in turn, triggers or exacerbates stress-related disease.

Consistent with its purported role in reducing work-related stress, job satisfaction shows a strong inverse relationship to work-life conflict. Individuals who score high on work-life conflict have consistently been shown to be highly dissatisfied with their jobs (Bedeian et al., 1988; Bhagat et al., 1985; Duxbury & Higgins, 1998; IntraScope, Gardell, & Lindell, 1987; Thomas & Ganster, 1995). Duxbury & Higgins' study found a substantial difference between high- and low-conflict groups on their measure of job satisfaction: nearly 80% of employees with low work-family conflict were satisfied with their jobs, compared to only 27% of the high conflict sample. This reduction in job satisfaction is dramatic, given that, typically, 60 to 70% of employees are satisfied with their jobs (Duxbury & Higgins, 1991; Robbins, 1993; Statistics AMERICA, 1994). These findings indicate that, like work stress in general, work-life conflict may have the potential to generate costly withdrawal behaviors indirectly through its effect on job satisfaction.

### **5.2.2.2 Organizational commitment**

Commitment is loyalty. An individual who has high organizational commitment is willing to exert extra effort on behalf of the organization, and has a strong desire to remain with the organization. Commitment, like job satisfaction, is related to reduced absences and strongly related to turnover (Duxbury & Higgins, 1991), and thus, may be an important indirect contributor to costly withdrawal behaviors.

Research suggests a strong negative relationship between work-life conflict and organizational commitment. Individuals who view their employers as being unsupportive of their non-work roles are less likely to feel a sense of loyalty to the perceived source of the conflict. Duxbury & Higgins (1998) found that only 47% of employees with high work-life conflict were committed to their employers versus nearly 70% of employees in the low conflict group. Given the high association between commitment and turnover, these findings suggest that reducing work-life conflict may be an effective means for organizations to minimize turnover.

### **5.2.2.3 Reduced quality of relationships**

It has been suggested that under conditions of distress, deterioration occurs in the quality of interpersonal relationships on the job. Individuals experiencing distress have been found to show markedly less trust in, respect for, and liking for those they work with. Research suggests that the more energy that is consumed in bad relationships, the less constructive energy is available to perform the job, hence threatening productivity. In addition, poor working relations have the effect of reducing employee satisfaction, and in turn, employee attendance. The reduced quality of relationships in the organization, therefore, may contribute to absences in the short-run, and to reduced organizational health in the long run.

## **6. Estimated Prevalence of Work –Life Conflict**

Recently, attempts have been made to estimate the prevalence of work-related stress among American employees. Data from statistics, for example, indicate that:

66% of American employees- - nearly 10 million adults- - believe they're exposed to some sort of health risk due to work - life conflict, of these, 25% cite stress from excessive work-life demands as the perceived threat.

32% of employees believe that these exposures have already had a negative effect on their personal health; men are more likely to report health risks related to the physical environment (e.g., dust, noise); women are more likely to cite computer screens and stressful interpersonal relationships as problem sources.

Professionals are more likely to report risks related to excessive work demands; skilled workers are more likely to cite problems related to the physical environment (dust, noise). Individuals with low control over decision-making perceive high psychological distress (40% of American workers in high demand-low control jobs report high perceived stress!)

This section of the report uses survey data collected by Duxbury and Higgins between 1991 and 1998 to provide an indication of the prevalence of work-life conflict among the American workforce. This data is drawn from four large studies conducted between 1991 and 1998, collectively representing nearly 30,000 public and private sector employees across America

## **6.1 Description of the Studies**

### **6.1.1 The Samples**

The studies on which this section is based were conducted by two of the authors between 1991 and 1998 (Duxbury et al., 1991; Higgins et al., 1992; Duxbury-Higgins Associates, 1997; Duxbury & Higgins, 1998). They include:

A federal public sector survey of roughly 6,000 federal employees working in the National

Capital Region, representing six government departments (Duxbury et al., 1991).

A private sector survey of roughly 15,000 employees from a cross-section of 30 small and large geographically diverse organizations across America (Higgins et al., 1992).

An independent survey of 2,500 employees working for a large service sector company at sites across America (Duxbury-Higgins Associates, 1997).

A survey of 5,400 employees working in 40 medium to large private, public, and non-profit organizations in the region of Saskatchewan (Duxbury & Higgins, 1998).

All studies involved surveys of men and women in a variety of occupations, both with and without dependant care responsibilities. Dependant care was defined as having responsibility for either a child under 18, or for an elderly or disabled relative with whom time was spent on a regular basis. Job type was distinguished as being either professional/managerial (i.e., career occupations), or non-professional/non-managerial (i.e., clerical, technical, production work, etc.) (*Note: In the tables that follow these jobs type categories are labeled "professional" and "non-professional."*) For the purpose of the following analyses, the public and private sector work-life studies (i.e. Studies One and Two) are combined under the heading "1991-92 national sample". Because Study Three involved a single organization, and as such, must remain anonymous, it will be referred to as the "1997 Single Organization". Study Four will be referred to as the "1998 Saskatchewan study". For further information about the national sample and the Saskatchewan study, please refer to the source documents listed in the reference section.

### **6.1.2 The measures**

All data presented in this section were collected through pencil and paper survey using measures recognized in the empirical work-life literature (see Appendix A for a discussion of these measures). All psychological outcomes (depressed mood, life satisfaction, perceived stress, burnout, perceived health, intent to turnover, commitment, job satisfaction) were self-report using one to five Likert rating scales. For these measures, results are expressed as the proportion of the sample that scored high (e.g., % who reported a high level of depressed mood or job satisfaction). The number of days absent from work and the number of physician visits were collected by asking respondents to indicate how often they had engaged in the behavior (e.g., had been absent from work, had visited a physician). For these measures, results are expressed as the average (mean) per year.

Every effort was made to maintain consistency between studies. However, specific study requirements and the addition over time of new measures (e.g., spillover, burnout and perceived health) or better measures (e.g. work-interferes with family) has meant that not all variables are included in each dataset. (Refer to Appendix A for full descriptions of the measures and reference information.)

### **6.1.3 Objectives of this analysis**

This analysis will:

Examine the level of work-life conflict among American employees; identify employee groups who seem most at risk for work-life conflict and ill health (i.e., by gender, job type).

Examine individual outcomes associated with work-life conflict (depressed mood, life satisfaction, perceived stress, burnout, perceived health, contacts with a physician).

Examine organizational outcomes associated with work-life conflict (absenteeism, turnover, job satisfaction, and commitment); explore how these outcomes differ between individuals with high work-life conflict and those with low conflict; and explore how these outcomes differ between individuals with high control over the work/non-work interface, and those with low control.

### **6.1.4 Interpretation of the Data**

Due to the large sample sizes almost all the between group differences (i.e. men versus women within a particular sample; professional/managerial women in 1991 versus professional/managerial women in 1997) are statistically significant. These differences may not, however, be substantive (i.e. worthy of note). For the purposes of this report we have defined substantive as follows:

For Table 1 (i.e. comparison of total samples for the three data sets):

For the individual and organizational outcome data differences of 2% or more are considered substantive. In the case of the absenteeism and physician visit data mean differences of 0.5 or more are considered substantive.

For Table 2a and 2b (i.e. comparison of sub-samples using the three data sets):

For the individual and organizational outcome data differences of 5% or more are considered substantive.

In the case of the absenteeism and physician visit data mean differences of 1.0 or more are considered substantive.

For Figures 4 and 5 (i.e. comparison of sub-samples for the Saskatchewan data set only):

For the individual and organizational outcome data differences of 5% or more are considered substantive. In the case of the absenteeism and physician visit data mean differences of 1.0 or more are considered substantive.

### **6.2 Overview of the findings**

Table 1 provides a comparison of the three samples in terms of work-life conflict and a variety of individual and organizational outcomes discussed in Section 5. Three observations may be made from this data. First, in spite of many differences between the samples in terms of both sample composition and the time at which data were collected, the studies yielded remarkably

similar data on work-life conflict. The findings indicated that slightly more than one in three American employees (35.6% to 40%) experience a high level of work-life conflict.

Second, there was also a remarkable consistency across individual outcomes. The stability of these findings was rather alarming, given the potential health risks associated with these measures. The data indicated that:

One third of American employees report high levels of depressed mood; half experience high levels of perceived stress; and one quarter feel "burned out" from their jobs. No such general statements can be made about organizational outcomes, which seemed to vary.

Fifty-five to 66% of respondents were highly committed to their organizations; 40% to 61% were highly job satisfied; roughly 12% reported high intent to turnover.

Finally, differences between the 1991-92 sample and the 1998 study suggest that:

Work-life conflict, perceived stress, work absences and physician visits may be on the rise while job satisfaction, life satisfaction and perceived health may be decreasing.

**Table 1: Prevalence of work-life conflict and selected individual and organizational outcomes among employees in AMERICA**

Outcome		1991-92	1997	1998
Percent High				
<b>Work-family conflict:</b>		35.6	38.1	40.1
<b>Individual outcomes:</b>	Depressed mood	33.1	31.6	34.7
	Life satisfaction	42.5	44.7	38.4
	Perceived stress	47.3	49.2	50.5
	Burnout	--	26.1	27.3
	Perceived health	--	48.7	46.5
<b>Organizational outcomes:</b>	Intent to turnover	13	--	12.1
	Commitment	56.1	64.4	55.3
	Job	61.6	39.4	49.5

	satisfaction			
Mean per year				
<b>Days absent:</b>	Total	4.1	8.3	9.6
	Due to Illness	--	5.2	4.9
	Due to family	--	2	2.9
	Due to fatigue	--	0.9	1.8
<b>Number of physician visits:</b>		2.7	3.4	3.8

### 6.3 Who's at risk for work-life conflict and health problems?

Tables 2a and 2b provide information on all three samples by gender and job type. Table 2a is limited to respondents with dependant care responsibilities (i.e., for either a child or an elderly or disabled family member); Table 2b provides data on employees without dependant care responsibilities. In order to allow readers to find information on subgroups of interest, these tables present a high level of detail. Not all of the relationships shown in this data can be discussed in the context of this report. The following discussion uses these tables to make some general observations regarding which employee groups encounter high work-life conflict and which may be at particularly high risk for stress-related illness.

Table 2a: Prevalence of work-life conflict and selected individual and organizational outcomes among employees in America (employees *with* dependant care responsibilities)

Outcome	1991-92 National Sample				1997 Single Organization				1998 National Sample			
	Professional		Non-Professional		Professional		Non-Professional		Professional		Non-Professional	
	M	F	M	F	M	F	M	F	M	F	M	F
	Percent High											
Work-family conflict:	38.5	51.4	25.6	36.1	49.1	51.6	35.5	36.4	39.4	47.9	29.6	35.4
Individual outcomes:												
-Depressed Mood	22	34.1	25.6	43.1	25.6	24.7	30.6	38	28.2	31.2	32.3	43.2
-Life	47.9	49.6	43.1	38.9	47.6	56.1	30.6	43	42.2	43.5	34.5	36

Satisfaction												
-Perceived Stress	38.7	49.7	40.5	56.2	40.2	43.5	55	54.5	46.1	53.6	46.8	56.7
Burnout	-	-	-	-	25.3	26.2	29	25.3	26.9	29.6	22.8	28
Perceived Health	-	-	-	-	49.7	47.6	45.9	47.2	57.8	61.1	49.9	48
Organizational Outcomes:												
-Intent to turnover	11.5	13.2	10.1	11.3	-	-	-	-	9.8	12.2	11.1	9.8
Commitment	57.8	61	57.2	57.8	69.6	73.8	66.1	63.4	59.2	55.6	49.4	58.2
Job Satisfaction	62.5	67.9	63.7	61	42.3	50.9	30.6	37.6	47.4	49.3	48.2	52.3
	Mean per year											
Days absent (total)	2.63	4.51	4.1	5.23	6	7.1	7.2	10.1	7	12.1	8.4	12.6
-Due to illness	-	-	-	-	3.4	3.4	4.2	6.4	3	6.1	4.3	6
-Due to family	-	-	-	-	1.6	2.4	1.9	2.7	2.4	4.1	2.7	4.4
-Due to fatigue	-	-	-	-	0.7	1	0.9	0.9	1.6	1.8	1.4	2.2
-Number of physician visits	1.99	2.92	2.23	3.34	2.9	3.9	3.5	3.6	3.2	3.8	3.6	4.1

**Table 2b: Prevalence of work-life conflict and selected individual and organizational outcomes among employees in America (employees *without* dependant care responsibilities)**

Outcome	1991-92 National Sample (N=7.876)				1997 Single Organization (N=816)				1998 Saskatchewan Sample (N=1,288)			
	Professional		Non-Professional		Professional		Non-Professional		Professional		Non-Professional	
	M	F	M	F	M	F	M	F	M	F	M	F
	Percent High											
Work-family conflict:	29.9	38.5	23.1	28.1	34.8	42.5	21.9	29.5	34.7	37.7	24.3	24.1
Individual outcomes:												
-Depressed Mood	23.4	35.7	27.8	40.8	8.7	28.8	19.5	35.6	27.4	32.1	33.1	40.3
-Life Satisfaction	43.4	47	34.9	40	46.7	55.5	34.4	40	38.3	45.1	29.1	36.9
-Perceived Stress	38.5	51.8	41.3	52.2	34.8	45.9	45.3	52.9	43.3	50.8	46.4	49.7
Burnout	-	-	-	-	17.4	30.8	18.8	30.4	26.8	32.7	26.8	27.8
Perceived Health	-	-	-	-	51.1	53.8	63.2	46	57.6	52.1	52.3	47.2
Organizational Outcomes:												
-Intent to turnover	17.3	16.2	16.8	15.2	-	-	-	-	21.9	16.5	17.9	14.1
Commitment	48.9	53.2	49.8	55	65.2	66.4	63.3	56	49.1	57.9	46.8	54.7
Job Satisfaction	58.7	63.1	56.1	59.4	42.4	45.9	28.1	36.1	47.3	49.2	47.5	50.7
	Mean per year											
Days absent (total)	2.97	3.8	3.89	4.4	4	5.6	4.5	9.7	6.6	9.2	5.8	8.9
-Due to illness	-	-	-	-	2.8	3.5	2.9	6.8	4.3	5.7	3.7	5.7
-Due to family	-	-	-	-	0.6	0.9	0.6	1.5	0.9	1.1	0.8	1.2
-Due to fatigue	-	-	-	-	0.6	1.1	0.5	1	1.3	2.4	1.3	2
Number of	1.99	2.82	2.38	3.26	3.6	2.7	2	3.6	3.3			

physician Visits												
---------------------	--	--	--	--	--	--	--	--	--	--	--	--

### 6.3.1 Work-life conflict

Tables 2a and 2b provide support for much of the literature reported in Section 4 on the moderators of work-life conflict. The following general observations can be made from this data:

Women report substantially more work-life conflict than men, regardless of job type or dependent care status, men and women who perform managerial or professional work report substantially more conflict between work and non-work than their counterparts in non-professional positions, men and women with dependent care responsibilities report substantially more work-life conflict than their counterparts without such obligations approximately half of the mothers who work in managerial and professional positions and almost 40% of mothers employed in non-professional positions report high work-life conflict. These percentages have remained very stable over time. The amount of work-life conflict reported by men appears to have increased substantially over time.

Taken together these last two observations suggest that:

American organizations have not yet provided dual-income employees with dependent care the types of support they need to balance work and non-work obligations and roles, and work-life challenges may be mounting for men (i.e. becoming an issue for all employees with dependent care responsibilities rather than a "women's issue")

### 6.3.2 Individual outcomes

Consistent with the literature reported in Section 5, women also appeared to be at greater risk for depressed mood and perceived stress. With few exceptions, this varied little according to dependant care status (i.e., women with and without dependants reported comparable levels of stress and depressed mood). The relationship of individual outcomes to job type, however, was opposite to that observed with work-life conflict. Depressed mood and perceived stress were *lower* among professional and managerial groups. This supports literature which has found that higher income and educational attainment is associated with an increased ability to cope. In addition, this finding reinforces the assertion that specific characteristics of the jobs of professionals and managers, especially autonomy and control over work and work hours, can minimize conflict for these employees. Control will be further examined later in this section.

### 6.3.3 Organizational outcomes

In spite of their greater difficulties in terms of work-life conflict and individual outcomes, women appeared to be somewhat more committed to their employers than were men. Women encounter both high conflict and distress and high commitment is consistent with literature

than to personal or organizational factors (see Section 5). Supporting this notion was the observation that turnover seemed to be linked to dependant care status, with those with dependants expressing the lowest level of turnover intentions (roughly 10% to 13%, compared to 14% to 18% among employees without dependants). This data suggests that both turnover and commitment may be more related to life cycle stage, opportunity, and mobility than to other personal or work factors. This also implies, however, that employees who are experiencing high levels of conflict may perceive few options but to remain in highly stressful situations.

Job satisfaction showed no consistent patterns according to gender, job type, or dependant care status. The only noteworthy observation was that it appeared to be lower in the more recent studies than it was in the earlier study. Although this comment is speculative due to sample differences, it is consistent with the increases in absence and physician visits observed in Table 1. Literature suggests that job satisfaction is highly related to work absences and health (see Section 5.2).

### **6.3.4 Absences and physician visits**

Like the individual outcome data, these findings suggest that women, non-professional groups, and those with dependant care responsibilities are at particularly high risk for stress-related illness. At the extremes were non-professional women with dependants (who averaged 12 days absence per year), and professional men with no dependants (3 days absence).

Women consistently reported more absences and physician visits than did their male counterparts. Detail by reason for absence shows that women missed more work than men both for family reasons and for personal illness. Differences between women with dependants and those without, however, suggest that much of women's higher absence may be related to dependant care needs. Absence due to illness was virtually identical for women with dependants and those without. On the other hand, absence for family reasons among women with dependants was doubles that seen among women without dependants.

### **6.4 The effects of work-life conflict on individual and organizational outcomes:**

Sections 6.2 and 6.3 provided a profile of American employees in terms of their level of work-life conflict, individual outcomes and organizational outcomes. This section of the report looks at the relationship *between* work-life conflict and these various outcomes.

Figure 4 illustrates the close relationship between work-life conflict and an individual's work attitudes, behaviors, and perceived well-being (*Note that work-life conflict was associated with adverse effect on all of the outcome measures examined. Only the most salient findings were summarized in Figure 4.*). High work life conflict can be seen to be substantially associated with:

- Decreased wellness in terms of perceived stress and physical health, depressed mood, and especially, burnout.
- Reduced job satisfaction and organizational commitment. Greater use of the American

medical system (i.e. increased number of physician visits, increased illness.

- Increased absence from work

Figure 5 provides support that work-life control can significantly improve work attitudes, behaviors, and perceived well-being among employees with dependants. (*Note that control led to improvements in all of the outcome measures examined. Only the most salient findings are summarized in Figure 5.*) Higher control over the work-life interface can be seen from this data to be substantially associated with:

- Increased wellness (i.e. lower perceived stress and depressed mood, higher life satisfaction).
- Increased job satisfaction.
- Lower use of the American medical system (i.e. decreased number of physician visits).
- Decreased absence from work.

Consistent with their greater responsibility for home and family, women appeared to obtain the greatest benefit through increased control, particularly in terms of work absence and work-life conflict. It is important to note, however, that control led to more favorable individual and work outcomes among *both* men and women. This data, when interpreted in light of our earlier findings that work-life conflict appears to have increased over time for men, supports our contention that work-life conflict is no longer "just a women's issue."

## 6.6 Summary

This section of the report has provided an indication of the prevalence of work-life conflict among American employees, and allowed us to identify groups who may be at particularly high risk for conflict and stress-related illness. The findings suggest that just over one in three employees in America suffer from an inability to balance their work and non-work life. Extrapolated to a 1998 workforce of roughly 15.6 million, this means that work-life conflict may be a problem for as many as 5.5 million American workers.

The findings also identify women as being at particularly high risk for work-life conflict. Consistent with literature which shows that employed women still shoulder the responsibility for the care of home and children, women in these samples reported higher work-life conflict than their male counterparts. Women with children working in professional and managerial occupations, in particular, reported especially high work-life conflict. This data would suggest that the nature of career occupations (e.g., long hours, travel, etc.) and work cultures which expect professionals to give priority to work at the expense of family may be incompatible with work-life balance. It should, however, be noted that in spite of their higher level of work-life conflict, women in professional and managerial work reported lower perceived stress and depressed mood than their non-professional counterparts and fewer absences and physician visits. This data suggests that employees in career occupations may be better able to manage work-life conflict due to autonomy, flexibility and the financial ability to purchase services to

help them cope. This pattern, therefore, identifies women in non-professional/non-managerial occupations as being at greatest risk for work-life conflict to develop into more serious stress-related illnesses. It is, however, important to note that this data suggests that work-life conflict is a growing issue for men. This suggests that measures to help "mothers" balance will be addressing only part of the problem.

Finally, analyses of the relationship between work-life conflict and individual and organizational outcomes implicated work-life conflict in the development of a variety of adverse emotional- physical, and work-related outcomes. Control data indicated that increasing control over the work-family interface may be an especially effective means of minimizing these adverse effects.

## **7. AN ESTIMATE OF THE COST OF WORK-LIFE CONFLICT TO AMERICAN EMPLOYERS AND THE HEALTH CARE SYSTEM**

Until now, we have viewed work-life conflict in terms of its considerable human costs, and the associated direct and indirect costs borne by organizations. Work stress and work-life conflict, however, are not problems of individual employees and organizations, but are wider societal problems that are ultimately shared by all players in society (Cooper, 1996). This section of the report will take the discussion one step further by attempting to assign a dollar value to the cost of work-life conflict. Specifically, we will estimate two sets of costs; costs to the employer (operationalized as absence from work due to high work-life conflict) and costs to the American health care system (operationalized as physician visits arising from high work-life conflict).

This section is divided into four main sections. The first introduces the socioeconomic model used as the rationale for examining the costs of work-life conflict at the national level. Second, a methodology and formula for estimating costs is presented. This methodology is then used to produce estimates of the costs of work-life conflict in terms of two indicators at the national level: work absences and physician visits. These indicators were chosen in order to provide an estimate for each of two economic sectors (the cost of work absences to organizations, and the cost of physician visits to the health care system). The part of the report concludes with a summary and discussion of the limitations of this methodology.

### **Figure 6: Three perspectives on the economic (adapted from Cooper et al., 1996) costs of work-related stress**

**National:** (socioeconomic and health care costs)

**Organizational:** (financial costs and declining organizational health)

**Individual:** (loss of welfare)

The above socio-economic perspective suggests that in order to estimate the true cost of workplace stress, we must look not only at the costs incurred by organizations (in terms of lost output due to absence, for example), but also to other societal sectors for the "hidden costs". In economic terms, hidden costs are referred to as "externalities": significant costs that are born by

segments of society who are not receiving the benefits. For example, when employers driven by short-run bottom line concerns increase workloads but provide little or no support to their employees (as has been shown to be the case in the American work-life arena - see Section 1.1.4), organizations benefit through increased profits, while somebody else pays. In the case of work-life conflict, it is the employee who pays through distress and illness. So does the American health care system as it foots the bill for the costs of treating stress-related illness.

Following are the basic components of the socio-economic assessment model (Levi & Lund-Jensen, 1996), and the American data sources used to meet these needs:

1. **Health and social data** are needed from which one can calculate the total number of lost workdays, and the frequency of use of the target health services (in our case, physician visits). Data for the number of lost workdays were obtained from Statistics AMERICA's 1997 Labor Force Survey absence data. Data for the number of physician visits are based on the working age population 16-64 years.
2. **Basic economic indicators** of the economy and health care system are needed in order to assign a value to the average output per worker per day and the average cost of the health care service. The value of work time lost can be measured by the average value of work time in society. The datum selected for this study reflects average earnings of full-time full-year workers for 1996 (i.e. \$37,000 per year), the most recent year available (Statistics AMERICA, 1999). The value of a physician visit was inferred from the average cost of a consultation with a general practitioner or specialist. This data was much more difficult to obtain. Since each health care jurisdiction collects its own data, there was little consistency in information available from each jurisdiction. Personal communication with the American Institute for Health Information yielded a national average of roughly \$35 for a medical consultation in 1994, the most recent year for which data were available. Unfortunately, the estimate was not based on data from all jurisdictions. The figure, therefore, was double checked against separate lists of fees by region. Fees for all regions ranged from roughly \$25 to \$50 per consultation, so the estimate was considered to be within acceptable limits for the purpose of this calculation. It should be viewed with caution, however, due to the variability in reporting procedures between jurisdictions.
3. **An estimate of the proportion of sickness occurrence related to the stressor.** This component of the model is the greatest challenge. In the context of general work stress, with which the model most frequently has been used, this component requires: (1) an epidemiological estimate of the prevalence of work stress in the general population; and (2) the relative risk of adverse health outcomes associated with work-life stress. Often, neither of these figures is available in national level data

### 7.2.3 Estimating prevalence, relative risk, and the etiologic fraction

Table 3: Data for estimating prevalence of work-life conflict and relative risk for work absence: Saskatchewan dataset, 1998

	<b>Exposed group: high work-life conflict</b>	<b>Control group: low work-life conflict</b>
<b>Prevalence (P)</b>		
Total	35%	24%
Men	33%	23%
Women	36%	25%
Professional / Managerial	41%	20%
Non-professional	30%	27%
<b>Number of days absent*</b>		
Total	13.2	5.94
Men	9.71	4.78
Women	15.85	6.84
Professional / Managerial	11.4	5.65
Non-professional	15.21	6.11
<b>Relative Risk (RR)</b> <b>(ratio of absence high-conflict group : absence low-conflict group)</b>		
Total	22.2	
Men	2.03	
Woman	2.32	
Professional / Managerial	2.02	
Non-professional	2.49	
<b>Etiologic fraction <math>(RR-1)*P/((RR-1)*P+1)</math></b>		
Total	30%	
Men	25%	
Women	32%	
Professional / Managerial	29%	
Non-professional	31%	

\*Days absent includes time lost for all reasons, including illness, family responsibilities, etc. Once the population at risk is quantified, and their excess risk identified, we can calculate how

much of the total absence would not have occurred had the risk factor not been present in the population (Question 3: the etiologic fraction). This is calculated from prevalence (P) and relative risk (RR) with the formula:

$$\text{Etiologic fraction} = (\text{RR} - 1) * P / ((\text{RR} - 1) * P + 1)$$

If the risk of the exposed group is 2.22 times the risk of the control group, and the prevalence is 35%, then the formula gives  $((2.22-1) * .35 / ((2.22-1) * .35) + 1) = 30\%$ . Excess absence among employees who worked under conditions of high work-life conflict, therefore, has been quantified as 30%. This fraction varies according to differences in prevalence and relative risk between groups. Gender differences were pronounced: excess absence among women with high work-life conflict was estimated to represent 32% of all women's absences, compared to a figure of 25% for men. There was very little effect of job type (excess absence among both professional/managerial and non-professional employees accounted for roughly 29% to 31% of absences).

Table 4 presents analogous data for physician visits. The fraction obtained for this outcome was 14% (i.e., excess visits to a physician among employees who worked under conditions of high work-life conflict represented 14% of all physician visits). This fraction was considerably lower than the fraction obtained for work absences (30%). This difference suggests that work-life conflict has a stronger effect on work absence than does physician visits, as would be expected if not all absences are due to illness, and not all illness warrants medical attention. Again, the fraction was higher among women (17%, versus 9% among men). There were no job type differences.

The fractions calculated from this step of the model can now be applied to economic and cost data at the national level to attempt to assign a dollar value to the excess costs associated with work-life conflict. Note that only the data for the total sample will be used in this final step, as gender and job type are not included in financial costs estimates.

**Table 4: Data for estimating prevalence of work-life conflict and relative risk for physician visits: Saskatchewan dataset, 1998 (N = 5,397)**

	<b>Exposed group: high work-life conflict</b>	<b>Control group: low work-life conflict</b>
<b>Prevalence (P)</b>		
Total	35%	24%
Men	33%	23%
Women	36%	25%
Professional / Managerial	41%	20%
Non-professional	30%	27%
<b>Number of physician visits*</b>		

Total	4.62	3.17
Men	4.14	3.17
Women	4.98	3.17
Professional / Managerial	4.07	2.79
Non-professional	5.26	3.36
<b>Relative Risk (RR)</b> <b>(ratio of visits high-conflict group : visits low-conflict group)</b>		
Total	1.46	
Men	1.31	
Woman	1.57	
Professional / Managerial	1.46	
Non-professional	1.57	
<b>Etiologic fraction <math>(RR-1)*P/((RR-1)*P+1)</math></b>		
Total	14%	
Men	9%	
Women	17%	
Professional / Managerial	16%	
Non-professional	15%	

\*visits to the physician excluded regular check-ups and visits associated with pregnancy

#### 7.2.4 Applying etiologic fraction to national indicators and cost data

Table 5 provides data used to calculate the economic costs of work-life conflict at the national level. The procedure involves using the proportion of excess sickness occurrence obtained in the Saskatchewan sample (the etiologic fraction) as a multiplier for national level data. The results indicate that, in 1997, excess work absence among Americans working under conditions of high work-life conflict was roughly 19.8 million workdays. At output equal to average earnings of \$135 per day (*Assuming average annual earnings of \$37,000 (Statistics AMERICA 1999d).*), this represents a loss to American organizations of roughly \$2.7 billion dollars. In terms of health care costs, estimated excess physician visits among Americans working under conditions of high work-life conflict totaled 86.9 million in 1996-1997. At an average cost of \$35 per visit, this represents public health care expenditures of roughly \$425.8 Million to treat individuals for problems related to work-life conflict.

**Table 5: Estimated economic costs of work-life conflict (work absence and physician visits), AMERICA\***

<b>Factor</b>					
<b>Work absence</b>	<b>Total days lost in AMERICA</b>	<b>Etiologic fraction</b>	<b>Excess days attributable to work-life conflict</b>	<b>Cost / day</b>	<b>Cost of work-life conflict</b>
	66 million	0.3	19.8 million	\$135	\$2.7 billion
<b>Physician visits</b>	<b>Total number of visits +</b>	<b>Etiologic fraction</b>	<b>Excess visits attributable to work-life conflict</b>	<b>Cost / visit</b>	<b>Cost of work-life conflict</b>
	86.9 million	0.14	12.2 million	\$35	\$425.8 million

+Number of physician visits based on working age population 16-64 years.

### 7.3 Summary

Application of the socio-economic model has provided a glimpse of the potential financial cost of work-life conflict to American organizations, employees and the American health care system. The model suggests that failure to respond to the needs of employees who are experiencing work-life conflict has contributed not only to mounting stress for employees, but also to substantial "hidden" costs to employers and governments. Our estimates suggested that, in 1997, work-life conflict in American cost organizations roughly \$2.7 billion in work absences, and the health care system approximately \$425.8 million for physician visits. This data reinforces our contention that employers as well as American society are paying a price for not addressing employees' needs with respect to work-life balance.

Although no financial estimates were attempted by gender, our data on relative risk indicate that work-life conflict may represent a considerable threat to the health of American women. Consistent with the work-life literature, women in this analysis had a higher level of work-life conflict than did men. What was noteworthy, however, was the extent to which women's conflict contributed to health outcomes in the estimates. Differences in the prevalence of conflict between women and men (36% among women, versus 33% among men) were significant, but comparatively minor as compared to the differences in their absence levels. Women with high conflict reported one and a half times the number of absences as their male counterparts (15.9 days versus 9.7). In the final calculation, work-life conflict contributed to 32% of all women's absences, as compared to 25% among men. Given that women shoulder the majority of domestic work (Lero & Johnson, 1994), some of these absences were certainly attributable to dependant care responsibilities (e.g., time lost to care for a sick child or other dependant), and hence, reflect social roles as well as personal illness. However, work-life conflict also accounted for a larger proportion of women's physician visits than it did men's (17% for women, versus 9% for men), suggesting a considerable stress-related health risk as well.

### 7.4 Limitations of the estimates

To our knowledge, these estimates represent the first attempt to assign a dollar value to the costs of work-life conflict at the national level, and as such, are not without their limitations. First, we must again stress that these estimates are minimal, representing only one of many potential indicators of the health effects of work-life conflict. For organizations, we used only the direct value of lost work time (i.e., the earnings of the absent employee). This does not,

"learning curves" during the replacement, and reduced productivity. Nor does it cover the cost of employee benefits to help workers cope, such increased use of employee assistance plans.

## **8. CONCLUSIONS AND RECOMMENDATIONS**

Work-life conflict is likely to be a continuing problem as America moves into the next millennium. The confluence of globalization, mounting competitive pressures, skills shortages, downsizing, restructuring and rapid technology growth have contributed to an unprecedented rate of organizational change, often without adequate support for the employees most affected by this change (Cooper et al., 1996). Accordingly, heavy work demands, long hours and job insecurity have become widespread features of the workplace (IntraScope & Theorell, 1990). Pressures are mounting on the home front as well, as the workforce becomes increasingly diverse, and employees' face a "double day" seeing to the needs of the family when their paid work is through.

In the absence of organizational support, most employees have been left to shoulder this burden alone. In the long run, this is not likely sustainable. The national survey data presented in this report (Section 6) suggest that conflicting work and home life pressures already may be taking their toll, as evidenced in high work-life conflict, depressed mood, perceived stress, and growing dissatisfaction with job and life. Although both men and women are feeling the pressures of conflicting work and home demands, work-life conflict has been shown to pose a particular threat to the health and well-being of women, who remain largely responsible for the care of home and family irrespective of their employment status (Lero & Johnson, 1994).

Economic analyses suggest that these very real, but often intangible, individual consequences also have "hidden costs" which impose financial burdens on employers and governments in the form of work absence and stress-related illness. Although economic analyses are not an ideal solution, and have been criticized for ignoring "grief and suffering" (Levi & Lunde-Jensen, 1996, p. 3), the model used here is still the only model available to assess the unpaid costs to society. It is often only through making hidden costs visible that organizations and policy makers are prompted to action (Cooper et al., 1996). Investment in prevention and health promotion needs to be supported and justified by a convincing business case.

The remainder of this report looks at the potential role of organizations in promoting healthier workplaces and reducing work-life conflict and stress among American employees. The discussion draws on the ecological model presented in Section 2 in order to explore the various points at which prevention or intervention measures may be most effective. The report concludes with suggestions for further research.

### **8.1 The organization's role in reducing work-life conflict**

The findings of this report indicate that American organizations may no longer be able to afford to ignore the issue of work-life conflict. Organizational health extends beyond the profit and loss account (Cooper et al., 1996). Long-term health depends on the organization's ability to sustain increased performance over time. Ultimately, an organizations' financial well-being is

dependent on the physical, psychological and emotional well-being of its members (Ibid.).

Organizational action to promote the well-being of employees can take one of three forms (Quick, 1997). It can be directed at the source of distress (primary prevention); it can be directed at the level of the individual response (secondary prevention); or it can be directed at the level of the outcome (tertiary prevention). In terms of the ecological model presented in Section 2 (see Figure 1), primary prevention efforts can be seen to correspond to action at the level of the stressor. Primary prevention would seek to remove or minimize the stressors within the work environment which generate the distress in the first place (e.g., might reduce the task demands, minimize role ambiguities, give employees more control over when and where they work). Secondary prevention acts at the point of the individual response to existing stressors. Secondary prevention efforts attempt to help the individual manage the stress response (e.g., relaxation training, physical fitness promotion, stress education). Tertiary prevention works on the right hand side of the model, attempting to minimize the distress outcomes which result when organizational stressors and the individual stress response have not been adequately controlled (e.g., counselling, substance abuse programs).

Those responsible for initiating interventions have generally believed that it is easier to change the individual than to change the organization (Ivan, Matteson, Freedman, & Phillips, 1990). This sentiment would appear to be equally true today as many employers restructure, downsize and implement technology with little input from employees. As a result, attempted solutions address symptoms, not causes (IntraScope & Theorell, 1990). This is unfortunate, as secondary and tertiary level "lifestyle" interventions, although temporarily beneficial to individuals, have been shown to have little effect in post-treatment follow-ups: it is reported that over 70% of employees who attend such programs revert to their previous habits within one to two years (Ivan & Matteson, 1988).

It has been suggested that in order for organizations to make real progress in reducing employee stress and stress-related illness, they will need to stop viewing work conditions and occupational stressors as "problems made by God" (Levi & Lunde-Jensen, 1996, p. 25). Secondary and tertiary interventions implicitly assume that organizations will not change; therefore, individuals must develop their resistance to the inevitable stressors (Cooper et al., 1996). Stress and work-life conflict, however, are not inevitable, but an outcrop of conventional models of work organization which have not changed with the times (IntraScope & Theorell, 1990). A sincere effort to improve the well-being of employees starts at the source, with a strategy of primary prevention to minimize or eliminate stressors in the work environment (Cooper et al., 1996).

Organizations have a critical role to play in primary stress prevention: whereas individual employees can mobilize their personal resources to cope as best they can, only organizations have the power to modify the work environment so as to minimize its stress-generating features in the first place (i.e. give employees more flexibility with respect to when and where they work, make work loads more realistic, adopt policies which are supportive of employees' personal lives/families). In terms of work-life conflict, the ecological model suggests that organizations can introduce primary prevention strategies at two points. They can take action at

the point of *work domain stressors* (i.e., minimize the stressors in the work environment); or they can take action at the point of the *modifiers* of the individual's response (i.e., maximize factors shown to reduce unhealthy stress responses).

### 8.1.1 Modifying the work domain

Organizations can assume proactive roles in reducing stressors from the work domain through some of the following primary prevention strategies proposed by Elkin & Rosch (1990); Cooper.(1996); and Sauter, Murphy & Hurrell, (2004):

**Adopt Lifestyle Design Benefit.** This method eliminates the personal barriers preventing employees from living life more abundantly.

**Redesign the task.** This method is aimed at improving the person-job fit by restructuring core job dimensions to better suit the individual's skills and interests.

**Redesign the content.** This method seeks to offer jobs which can provide meaning and stimulation, including such strategies as job rotation or job enrichment to minimize narrow, fragmented work activities.

**Adjust the work load and work pace.** This method alters both physical and mental work demands commensurate with the capabilities and resources of workers, avoiding both underload and overload.

**Redesign the physical work environment.** This method minimizes the distressful aspects of the physical environment either by eliminating noise, heat, etc., or by introducing growth-oriented settings, such as fitness centers.

**Encourage career development.** This method structures career paths through self-assessment and an analysis of opportunities to reduce individual frustration and improve job and career satisfaction.

**Analyze work roles and establish goals.** This method reduces stress through minimizing confusions or ambiguity.

**Share the rewards.** This method reduces distress and conflict over expectations by demonstrating clear performance-reward links.

**Define the job's future.** This method seeks to avoid ambiguity over matters pertaining to job security. Employees should be clearly informed of imminent organizational developments that may affect their employment.

### 8.1.2 "Modifying the modifiers"

The ecological model suggests two modifiers of work-life conflict that are amenable to primary prevention strategies: control and social support (*The remainder of the modifiers in Figure 1, such as sex, personality, coping and job type, are either unable to be altered, or involve secondary interventions.*). IntraScope's model (Section 4) and our survey data (Section 6) suggest that increasing employee perceptions of control, in particular, may be a powerful tool for reducing work-life conflict. Following are primary prevention strategies, drawn from Elkin & Rosch (1990); Cooper et al.(1996); Johnson et al. (1997) and Sauter et al. (2004), that may serve to increase employees' sense of *control* over work and work-life integration.

**Adopt Lifestyle Design Benefit.** This method eliminates the personal barriers preventing employees from living life more abundantly.

**Introduce flexible work schedules.** Provide schedules such as flextime, compressed work week and job sharing, in order to give employees some control over the coordination of competing work and home demands. Where schedules must involve rotating shifts, the rate of rotation should be stable and predictable.

**Allow employee input into scheduling.** Employees are in the best position to know what peak work demands are, and are the only ones to know their non-work needs!

**Offer flexible "cafeteria benefits" programs.** Employees who are able to select packages of health benefits can tailor them to their family needs (e.g., employees may prefer dental when children are young, and prefer to switch to RSP contribution plans later in life).

**Encourage participative management.** This method increases the amount of discretion and autonomy that individuals have by decentralizing decision making and increasing participation. The individual is able to exert greater control over work and to channel stress-induced energy.

**Provide employees with discretion over their work.** Wherever possible, allow employees the opportunity to control the when, where and how of their work tasks. This includes work pace, task assignments, methods of payment, resources used, task content and goal selection. Help them in this effort so their choices are coordinated with the needs of the organization and other workers.

Following is a list of primary prevention strategies to decrease work-life conflict by increasing *social support* in the workplace:

**Work to change the opinion of how your employees view their lives:** Financial hardship can, without a doubt, stir up many negative emotions. A debtor's sense of self, identity, and worth are often closely tied to their financial circumstances. Loss of money can thus be experienced as a loss of identity, self-esteem, and confidence. We live in a society in which image is important and lifestyle is seemingly defined by possessions. Money can be viewed as a powerful currency not only in a purely economic sense but also in relationships, and thus a real or perceived loss of interpersonal power can ensue when living on the edge of financial ruin.

**Work to change organizational culture.** A primary source of conflict is often an organizational culture which values long hours ("face time") over output, and which encourages rigid traditional career paths. Train employees and managers in diversity and work-life issues. Offer alternatives to hierarchical career paths. Send a strong message from the top that employee health and well-being is valued and critical to the business plan. Then reward it.

**Train managers in supportive behaviors.** Supervisors are critical in providing a work atmosphere that is supportive of employees and their needs. Supervisors do not always have the skills required to be effective in recognizing and responding to the signs of distress (both their employees' distress and their own!) These skills can be taught. **Train coworkers in work-life issues.** Be certain that all employees know how work-life issues affect them and others in their work environment. Where flexible work arrangements are available, make sure that they are implemented and monitored with an eye to their possible effects on the work of others in the workplace. **Provide opportunities for social interaction.** Jobs which allow regular and frequent personal interaction can provide both emotional support and actual help as needed in

only relieves distress by promoting communication and interaction, but also improves subsequent work performance. **Build formal and informal social mechanisms into the organization.** Teams, mentor ship programs, rewards ceremonies, and social events provide cohesive forces and opportunities for stress release through social interaction.

Regardless of whether they target the work domain or the modifiers of the distress response, primary prevention strategies seek to tackle stress and work-life conflict at the "front end". When remedial action occurs at the "back end" of the model (i.e., treating poor health and other distress outcomes), the approach is merely reactive and recuperative rather than proactive and preventative (Cooper et al., 1996). Although treating the symptoms may be easier, identifying the problem at its source can arguably arrest the whole process.

Finally, as employers, demonstrate exemplary human resources practices within their own workplaces. Organizations need to ensure that their own stress reduction and work-life programs serve as models for other American employers.

### **Work Outcomes**

Organizational commitment refers to loyalty to the employing organization. Mowday, Steers and Porter (1979) indicate that commitment is characterized by three factors: acceptance of the organization's values; willingness to exert effort on behalf of the organization; and a strong desire to remain an employee of the organization. The nine-item short form of the Job Commitment Scale developed by Mowday et al. (1979) was used in this study to measure commitment. A 5-point Likert-type scale (1 indicating strongly disagree, 5 indicating strongly agree) was used for all items. The scale score is the summed average of the item scores. High scores indicate greater commitment to the organization. Duxbury and Higgins (1998) report a Cronbach's alpha co-efficient for this measure of 0.92.

Job Satisfaction is the degree to which employees have a positive affective orientation toward employment. The "facet-specific" measure of satisfaction developed by Quinn and Staines (1979) was used in this study. Employees indicate how satisfied they are with their jobs in general, their pay, their work hours, their work schedule and their work tasks on a scale of 1 (very dissatisfied) to 5 (very satisfied). Job satisfaction is calculated as the summed average of item scores. High scores represent high job satisfaction. An immense amount of work by the Survey Research Centre of the University of Michigan went into the development of this scale. Duxbury and Higgins (1998) report a Cronbach's alpha of 0.88 for this measure.

Job stress was assessed using the Job Tension subscale of Rizzo, House and Lirtzman (1970) Work Stress Scale. The authors describe this scale as a measure of "the existence of tensions and pressures growing out of job requirements including the possible outcomes in terms of feelings or physical symptoms" (p. 481). A 5-point Likert scale (1 indicating strongly disagree, 5 indicating strongly agree) is used. High scores indicate high job tension. Duxbury and Higgins (1998) report a Cronbach's alpha of 0.79.

Intent to Turnover is defined as an individual's desire to not continue to be an organizational member. It is measured using a three question scale from the Michigan Organizational

Assessment Questionnaire (Cammann, Fichman, Jenkins, & Flesh, 1979). The first two items (I will probably look for a new job in the next year, and I often think about quitting) are answered using a five point Likert type scale with 1 indicating strong disagreement through 5 indicating strong agreement. The third question (How likely is it that you will be able to find a job with another employer with about the same pay and benefits you now have?) was answered using a five point Likert type scale with 1 indicating highly unlikely through 5 indicating highly likely. The scale score is the summed average of the three items. High scores indicate greater intent to turnover. Duxbury and Higgins (1998) obtained a Cronbach's alpha of 0.83 for this measure.

Absenteeism: The measure used in this study is a modification of the measure used in the Health and Daily Living Form (Moos, Cronkite, Billings & Finney, 1988) to assess absenteeism. Respondents were asked the following: "During the last 3 months have you been unable to work or carry out your usual activities because:

Of health problems?

Of family or personal problems?

You were emotionally or mentally fatigued?"

Total Absence is the sum of items a, b and c. Only item "a" was used by Moos et al. in 1988.

Our modifications make this measure more relevant to today's dual-income employee.

### **Individual Outcomes**

Stress was measured by means of the Perceived Stress Scale (PSS; Cohen, Kamarck & Mermelstein, 1983). The PSS was designed to assess appraisals of the extent to which one's current life situation is unpredictable, uncontrollable and burdensome. Respondents answer the PSS by indicating on a 5-point Likert-type scale the frequency within the last month that they have experienced various stressful feelings. Higher scores on this measure indicate greater levels of perceived stress. Duxbury and Higgins (1998) report a Cronbach's alpha co-efficient of 0.87.

Life Satisfaction was measured using the Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen & Griffin, 1985). The SWLS was designed to measure the respondent's global life satisfaction. The SWLS is a Likert-type scale on which respondents indicate the extent to which they agree with 5 statements describing their present state. Higher scores indicate greater levels of life satisfaction. Duxbury and Higgins (1998) report a Chronbach's alpha co-efficient of 0.87.

Depressed Mood was measured using a scale developed by Moos, Cronkite, Billings and Finney (1988). This construct is defined as a state characterized by low affect and energy, and persistent feelings of helplessness and hopelessness. High scores indicate higher levels of depressive symptomology. Moos et al. report Cronbach's alpha co-efficients ranging from 0.67 to 0.73. Duxbury and Higgins (1998) report a Cronbach's alpha of 0.76.

Burnout: Burnout is a newly defined concept in the realm of psychological stress that has recently gained extensive attention as a separate strain. Burnout as defined here is a state of physical, emotional and mental exhaustion which is often found in those who have involvement

with people in emotionally demanding situations. Chronic daily stresses rather than unique critical life events are regarded as central factors in producing burnout. At severe levels, burnout overlaps with symptoms of depression. Such situations are prevalent particularly in the human services professions and also in public service and managerial positions where clients and employees impose constant demands for attention. Burnout was operationalized in this study through the use of the Burnout Inventory developed by Maslach and Jackson (1986). High scores indicate high burnout. Maslach and Jackson report Cronbach's alpha coefficients ranging from 0.79 to 0.83. Duxbury and Higgins (1998) report a Cronbach's alpha of 0.80.

Physical Health: Two items were used to measure physical health in this analysis: Perceived physical health, and physician visits.

Perceived Physical Health was assessed using a single measure developed by Moos, Cronkite, Billings and Finney (1988) which asks respondents to rate their perception of their overall level of health on a 1 to 5 scale. Higher scores indicate better health.

Physician Visits: This item was operationalized using a measure from the Health and Daily Living Form (HDL) developed by Moosl. (1998). Respondents were asked: "Not counting check-ups and maternity visits, how many times during the last 12 months have you seen a physician."