Mental Health and Substance Use at Work: perspectives from research and implications for leaders

A Background Paper prepared by The Scientific Advisory Committee*

to

The Global Business and Economic Roundtable on Addiction and Mental Health

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Bill Wilkerson, President, Global Business and Economic Roundtable on Addiction, and Mental Health Toronto, Ontario

November 12th, 2002

Dear Bill.

On behalf of the Scientific Advisory Committee to the Roundtable it is my pleasure to convey to you our report, "Mental Health and Substance Use at Work: perspectives f research and implications for leaders."

The report results from our analysis of over 3000 studies that were identified through series of computer assisted searches. To our knowledge, this was a unique exercise What you see before you is essentially a landscape of the research literature in the areas of depression, anxiety and addictions. It is not a review of the literature as suc but rather an analysis of the kinds of research that have been conducted primarily ov the last 25 years. As such, it is a beginning, not an end.

We have limited our observations to those that the entire committee could agree upo In that regard, the report is singular because it represents the consensus of several disciplines including medicine, psychiatry, economics and sociology. As you know, it difficult to achieve this type of consensus and we believe that the significance of our conclusions is magnified by the fact that members of several different professions ha arrived at the same point.

We hope that this report will be of use to you as you advance the extremely important work of the Global Business and Economic Roundtable on Addiction and Mental Hea

Sincerely,

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Executive Summary

The following are the major conclusions of a research literature analysis conducted by the Scientific Advisory Committee to the Global Business and Economic Roundtable on Addiction and Mental Health.

- The burden of mental health and addiction problems on the Canadian economy in productivity terms alone exceeds \$11 billion per annum. If indirect costs are added to this picture, the figure can be easily multiplied by three.
- 2. The workplace as a social environment has a major influence on the mental health of all who labour within it. The same environment can also influence the likelihood that certain employees will develop addiction-related problems.
- 3. At the same time, people bring personal problems to the workplace with them. These problems interact with different types of social environments in the workplace so that they are either more or less likely to result in threats to health and productivity.
- 4. In contrast to the situation 25 years ago, there is now far more research emphasis on how the social environment of work affects mental health and addictions. Simply put, the focus is now on the quality of employment relationships as a significant determinant of health in all its aspects.
- 5. Increasingly, it is understood that those aspects of the employment relationship that affect health are in large measure the same ones that affect productivity.
- 6. These findings point to the need for comprehensive strategies for the prevention of mental health and addiction problems characterized by modifications to key aspects of the organization and design of work. Within that framework, the quality of management practices is a specific target.

- 7. Much remains to be learned about the specifics of recruitment, selection and evaluation of managers and supervisors that will optimize their impact on mental health. Recently, research has begun to focus on the role of fairness in employment relationships as a factor underlying many of the specific findings about the impact of working conditions on mental health. In this context, fairness means the recognition and reasonable accommodation of another's interests, rights and claims.
- 8. With regard to addictions, recent research attention has been focused on how workplace cultures can develop in ways that either support or thwart the attempts of individuals to remain problem free. In this framework, the theory of "enabling" has been found useful both as a diagnostic and as a prescriptive tool at the organizational level. Enabling refers to a set of organizationally supported behaviours and attitudes that allow individuals with addiction problems to go unchallenged and unhelped. Antidotes to enabling include policies and programs aimed at the deliberate reconstruction of beliefs, attitudes and behaviours surrounding addictions and the use of psychoactive substances in general.
- 9. Within the context of a healthy workplace, remedial interventions such as Employee and Family Assistance Programs (EFAPs) are indicated as first line of defense tools. However, much needs to be done to ensure the ongoing effectiveness of such programs in progressively constrained fiscal environments. There is a danger that, in order to remain competitive, EFAPs may suffer in their ability to deal with serious mental health and addiction issues.
- 10. The rapidly developing field of research into mind-body interactions (psychoneuroimmunology) raises the very large question of the extent to which the true cost of mental health problems in the workplace is obscured by the largely hidden impact that they may have on physical health outcomes. Examples of such physical impacts include, at a minimum, cardiovascular disease, a variety of immune system, gastrointestinal and pulmonary disorders as well as certain types of injury involving musculoskeletal and soft

tissue damage. More is being learned about these mind-body interactions every month.

11. A research agenda for the next few years emerges readily from the conclusions of the studies analyzed in the preparation of this paper.

Introduction

Research on mental health and substance use as it relates to work has burgeoned during the last 25 years. Fueled by an increasing awareness of the human and economic losses associated with impaired capacity at work, research interest in this area has exploded in several different directions. The results of these endeavors are of signal importance to business leaders but to date there has been no forum in which they can be reviewed and discussed as a whole. The Roundtable provides an opportunity to assemble perspectives and findings from many scientific disciplines with the goal of discerning some order and pattern that will assist leaders in deciding what needs to be done to make our workplaces healthier and more productive.

This background paper is the first step toward the assembly of these perspectives and findings. It is essentially a bird's eye view of relevant research in areas as wide-ranging as: medicine, organizational psychology, business, law, economics, sociology and psychoneuroimmunology. As such, it is an initial survey of the kinds of research that are being done and of their implications for strategies, polices and programs. By necessity, this is a work in progress in which the present paper is but a milestone, albeit an important one. Additional, more in-depth reviews will follow as funding permits.

The focus of this first survey is on depression, anxiety and substance abuse.

This concentration was chosen because these appear to be the three sets of disorder that dominate the landscape in terms of impact on occupational and social functioning. Even within this framework we have been selective. For example, we do not deal in any depth with the issue of return to work policies and procedures.

The present discussion will follow the general map that the Roundtable's Scientific Advisory Committee set out for its consideration of the vast research literature on this topic.

Accordingly, we begin with what the research evidence tells us about the *nature* of the problem. This involves a discussion of how researchers view the extent and causes of mental health and substance abuse problems in the workplace. It involves also a

consideration of the human and economic costs of such problems in so far as they are quantifiable. We continue by looking at the *responses* that have been developed by workplaces to deal with mental health and substance abuse problems. These responses include interventions aimed at both individuals and organizations, at both remedial and preventive levels.

The Nature of the Problem

The net impact of depression, anxiety and substance abuse on productivity and health care costs that are born by employers is undoubtedly very large. A conservative estimate of productivity losses alone, based on the prevalence and impact of clinical depression, anxiety and substance abuse in the Canadian workplace is around \$11.1 billion per annum. This projection from 1993 (the most recent year for which comprehensive data are available) is conservative because it is based on only clinically recognizable levels of these disorders - those that would qualify as such under criteria established by the American Psychiatric Association. If the rigour of these criteria is relaxed to include sub-clinical syndromes and manifestations of burnout, demoralization, disengagement and excessive (as opposed to pathological) substance use, the losses could be three times the conservative estimate. This estimate does not include costs related to health care or social service systems. A calculation of the transfer of costs from the workplace to these systems (which are themselves workplaces subject to the same mental health and addictions problems as any other) has not been attempted. However, should such an attempt be made, it would need to be balanced with an effort to calculate the transfer of health benefits (in the broadest sense) from the workplace to society at large.² For just as some workplaces can be a source of burden for society, through the unnecessary production of harm, so too can other workplaces be a source of relief for society, through enlightened governance practices that foster health and wellbeing.

The data available to us at this time suggest that in any given workplace somewhere between 5% and 10% of the workforce will manifest serious and acute problems with depression, anxiety, substance abuse or some combination of these. Another 10%-15% may manifest lower levels of these disorders. But the manifestation of mental health and

addiction problems in the workplace presents us with an immediate question. To what extent are these problems imported into the workplace by individual employees and to what extent are they engendered by the workplace itself? The answer to this question has profound implications for strategies aimed at preventing and managing such problems. If we assume that individuals bring problems to the workplace with them, then our response is likely to be one that is aimed at helping or managing troubled employees in some manner. If we assume that organizations play a role in the genesis or precipitation of problems, our response is likely to be one that is aimed at modifying the organization of work in such a way as to reduce the occurrence of such problems. And then there are various combinations of these assumptions that allow for interventions at both the individual and organizational level.

In many ways, we can conceptualize the work of researchers over the last 25 years as an attempt to address this question: what is the relative contribution of organizational and personal factors to the genesis and precipitation of mental health and addiction problems at work?

During this period, the scientific focus has swung from an early emphasis on the role of personal factors to a current, more balanced approach in which organizational factors are seen as playing a catalytic if not causal role in the precipitation of mental health and addiction problems at work.³

Twenty-five years ago, the workplace tended to be seen as simply an environment in which problems manifested themselves. Today, the workplace is viewed much more as an environment whose social and technical organization has a significant influence on the wellbeing of employees. The sophistication of research has increased over this period to the point at which measurable changes in working conditions are now known to produce measurable changes in health outcomes. Particular attention has been paid to certain clusters of such working conditions. The two most prominent theories of how these conditions affect health involve the concepts of demand and control, effort and reward. These are essentially "balance" theories that are based on observations of how excesses of demand and effort and deficits of control and reward can place employees at significantly higher risk of many different diseases and mental health disorders. The most current idea to receive scientific support in this area is that imbalances of this sort

often do not arise by chance, but rather by choice. When employees believe that managers and supervisors are *choosing* to create health-defeating conditions of work, they are often described as being unfair. This sense of unfairness has been implicated as an additive factor that acts upon already health-hostile working conditions like a chill factor.⁵ In other words, it makes bad situations worse.

With regard to substance abuse, the concept of workplace culture is of particular importance. Numerous studies have shown that workplaces reporting higher levels of substance abuse are often characterized by social systems of shared values, beliefs, attitudes and understandings (in other words, "cultures") that support these damaging behaviours.¹⁷ Often, these social systems do not overtly support substance abuse but rather they subvert efforts aimed at controlling it. A prime example of this is the "enabling culture", in which there is a shared reluctance among employees and managers to confront those who manifest signs of substance abuse, thereby supporting or "enabling" the perpetuation and often the escalation of such problems. Such cultures are very likely resistant to most conventional, institutional forms of intervention, including drug testing of certain types.¹⁷

From yet another perspective, the rapidly emerging field of psychoneuroimmunology offers further insight into the significance of mental health at work, which for present purposes can be seen as including the appropriate or organizationally acceptable use of substances. This discipline and its many subdisciplines point to an increasingly solid link between mind and body to the point at which it can be said safely that some physical disorders are caused and many are precipitated by mental events or conditions. In the context of psychoneuroimmunology, the pathways that connect mind to body are emotions. Through these emotional pathways, researchers are actively exploring how (for example) both depression and anger can affect cardiovascular disease and how high anxiety can compromise the immune system to the point at which it is unable to defend the body against invading viruses and bacteria.¹⁸

Responses to the Problem

Studies of responses to the problems discussed in the previous section parallel the trends noted there in that there has been a shift from concentration upon personal factors to a more balanced approach in which both these and organizational factors are weighed.

Twenty-five years ago the typical response to mental health and addiction problems in the workplace was to seek effective ways of managing the people involved. Frequently this involved the use of what are now called Employee Assistance Programs and research interest tended to focus on their reach and effectiveness. During this earlier period research was used to determine the number and proportion of troubled employees that EAPs reached, the reasons for their referral and the effectiveness of such programs in resolving problems and restoring job performance.

EAPs have a long history dating back to the late nineteenth century. During the 1960's, 1970's and 1980's they achieved a reputation for their ability to reach and help a significant proportion of employees suffering from alcohol and drug problems, but also to some extent with mental health disorders. EAPs were a significant presence in corporate strategies for the management of a wide range of personal difficulties affecting, or likely to affect job performance. Presently, EAPs in the United States are undergoing a transition that sees them increasingly brought into the framework of managed care. Managed care refers to a means by which employers contract with a third party insurer who is also a provider or broker of services ranging from dental and optical care to treatment for mental disorders. These contracts are characterized by price and service schedules that often have "caps" or limits to what or how much will be provided. Consequently, limits may be set on the number of sessions that will be provided in the context of an EAP and/or on the overall fee that may be charged for the provision of such services. Unfortunately, little rigorous research has been conducted on these newer programs in Canada. Anecdotal evidence suggests, however, that the average number of therapeutic sessions being offered to EAP clients has decreased dramatically from nearly 7 ten years ago to less than 3 now. The likelihood of any serious substance abuse or mental health problem being effectively addressed in this time period would be low. Clients may be referred on to other agencies or to health care

providers, but little is formally known about their fate once this occurs. Clearly, this information gap signals a major research need.

Regardless of how effective EAP services are, or could be, they are still offered mainly after problems develop, and are not focused on prevention. Again, 25 years ago the typical conception of prevention involved some attempt to promote health and self-care through programs designed to help employees become fitter, leaner, more moderate in their consumption of alcohol and drugs, more able to cope with stress, less likely to smoke etc. Typically, these Health Promotion Programs (HPPs) had and have a questionable role in the prevention of serious mental health and addictions problems. They may, however, play a role in strengthening the resilience of those employees who could be considered at risk of becoming mildly or moderately depressed, anxious or overly dependent on alcohol and psychoactive substances.

The evidence suggests too that HPPs are likely to have such preventative effects only when the working environments into which they are injected are themselves benign or actively health promoting.⁷

At their best, EAPs and HPPs are likely to be only part, albeit an important part, of a comprehensive approach to the prevention and management of mental health and substance abuse problems.

Research during the last 25 years has been increasingly directed toward the role of the working environment in reducing – or increasing – the incidence of such problems. Monitoring the impact of organizational development and of change management on these problems is becoming a subject of greater interest among researchers, and there has been a modest increase in purpose–built projects to study how work can be modified specifically to achieve gains in mental health and substance abuse prevention. Partly, no doubt, this is due to the increasing recognition of the role played by mental health and sobriety in high-level productivity and competitive advantage.

In so far as research has been able to isolate conditions of work that may be amenable to health-promoting change, attention has been focused on supervisory and managerial behaviour. There is increasing recognition of the fact that key conditions of work such

as levels of demand and effort, employee influence and reward are created less by chance than by choice. And it is the choices of managers and supervisors (themselves constrained by directors and governors) that have come under increased scrutiny in efforts to identify the enabling and disabling dimensions of working conditions.¹⁰

In the last few years the dynamics of the relationship between employee health and managerial choices have become somewhat more visible. More and more is being written about the role of fairness in this relationship. When managers are seen as exercising choices about the organization of work that are detrimental to the health of employees, they can be seen as being unfair. Under conditions of chronic unfairness, mental health suffers. Whether or to what extent substance abuse is affected by the same circumstances is not clear because it has not been studied adequately. However, chronic unfairness and threats to mental health might result in the use of psychoactive substances to cope with ensuing anxiety, depression, pain and sleep disorders.

Not surprisingly, then, the focus of studies concerning the manner in which organizational development and change management affect mental health tends to be on how the behaviour of those with supervisory responsibilities can be modified to enhance employee job satisfaction and abate depression and anxiety.¹²

Within this concentration, it appears that a key dynamic is the degree to which employees are (1) possessed of information about the purpose of, and need for organizational change or development and (2) involved in making and implementing decisions about such change or development.¹³

While the "information/involvement" link to mental health appears to be sound in general, much remains to be learned about the specifics of how these dynamics can be managed effectively to produce gains in both mental health and productivity. One of the most salient yet unresolved issues in research and practice appears to be how much information and control are required to meet the mental health needs of employees. There are nested issues within this larger question pertaining to the quality and timeliness of information and to the variable needs of employees for influence over various aspects of their work such as pace, content and method.¹⁴

All of these scientific and practical questions are posed, of course, within the legal framework of the employment relationship, which itself offers major constraints in terms of distribution of control and information between managers and employees. The constraining quality of the legal framework of employment has rarely been examined with regard to its impact on employee mental health and yet it is clearly a major conditioning factor.¹⁵

Research is evidently at a crossroads regarding the degree to which organizational and personal factors affect mental health and substance use and the degree to which each set of influences should be the target of preventive and remedial interventions. While the emphasis during the last 25 years has shifted from a preoccupation with personal factors to a greater concentration on organizational factors, few studies deliberately set out to measure their relative contributions. This is an important topic for future research.

With regard to substance use and abuse in particular, there is some hope that culturally-based interventions may have a positive impact. Through education, and through programs directed at the modification of enabling behaviours, as well as at other norms supportive of inappropriate substance use, there is a real possibility that the incidence of problems in this area can be reduced.¹⁷

Conclusion

It seems reasonable to conclude from the research conducted to date that a comprehensive approach to the prevention and management of mental health and substance abuse related problems in the workplace should at a minimum contain the following elements:

- Modification of the organization and design of work to maximize opportunities for employees at all levels to participate meaningfully in the means, manner and method of carrying out their own work.
- 2. Support of managerial and supervisory selection, promotion and training practices that foster employee participation of this kind.

- 3. Modification of workplace cultures to support the moderate, appropriate or compliant use of certain substances (alcohol, prescription and over the counter drugs) and abstinence from others (all illicit drugs).
- 4. High quality Employee Assistance and Health Promotion Programs that, in the context of a healthy workplace will have a higher expectation of yielding cost-beneficial outcomes at both remedial and preventive levels.

The general proviso that should be attached to these recommendations is that this comprehensive approach should be subject to ongoing evaluation in the context of specifically designed research projects (please see "A Top Ten Research Agenda" following). Nevertheless, in the meantime the recommendations above reflect the best advice of the Scientific Advisory Committee with regard to the directions in which workplace practices should develop if the research in this area is to be any guide.

Essentially, the four elements of the comprehensive approach to prevention and management of mental health and substance abuse problems are based on the empirically verifiable proposition that employees bring some problems to the workplace with them and that the workplace itself contributes to others. With regard to problems that employees bring with them, the workplace can either raise or lower the probability that they will become productivity issues through the influence of the formal and informal systems of work organization.

Very little to do with implementing the comprehensive approach is free of difficulty. Many vexatious issues surround the sharing of job control and information, for example. Sometimes, it appears that things can get worse before they get better, partly because we may not have a full grasp of what it means to share control and information within standard employment relationships and partly because sometimes our sights may not be wholly focused on the goal. There is, without doubt, a need to forge a new social technology of work that serves mental health by providing better guidelines for the sharing of control and information within the employment relationship.

Ultimately, however healthy the organization of work itself may be, there will always be some employees who develop serious mental disorders or addiction problems. For this group, high quality EAPs and EFAPs (Employee and Family Assistance Programs) will

continue to be necessary. Although they have not been considered in this paper, it would seem commonsensical to posit this requirement for effective Return to Work Programs also.

The challenge in this regard appears to lie in the direction of ensuring high quality assessment, treatment and rehabilitation in the context of EAPs that are constrained by managed care frameworks.

A Top Ten Research Agenda for 2002 - 2005

Although ten items are numbered below, they could be addressed in quite a different order. In fact, they are tightly linked, each leading to or from one or more of the others. And clearly, the list could be much longer, not only by adding new topics but also by more fully articulating the ten existing questions. The questions are stated broadly in order to stimulate thought and discussion. They flow from the conclusions of the studies we have analyzed and from the calls for further research found there.

- 1. What are the relative contributions of organizational factors and personal factors to the genesis and precipitation of mental health and addiction problems in the workplace?
- 2. How can organizational and individual-level interventions be most powerfully coordinated to produce optimal outcomes in the prevention and management of mental health and addiction problems?
- 3. What is the real burden of mental health problems in the workplace when interactions between mind and body are taken into account?
- 4. What role does the workplace play in reducing or increasing the social burden of mental health disorders and the addictions?
- 5. How can workplace cultures be shaped so as to minimize the likelihood that the abuse of substances will occur and be tolerated?

- 6. What are the optimal prescriptions for managerial and supervisory practices that will most likely contribute to positive mental health among employees?
- 7. What are the minimum requirements for Employee Family Assistance Programs that will effectively address mental health and addiction problems in the workplace?
- 8. What is the role of Health Promotion Programs such as Stress Management Training in the context of a comprehensive approach to the prevention of mental health and addiction problems?
- 9. Are the Demand/ Control, Effort/ Reward Models that connect working conditions and health adequate for explaining mental health phenomena in "technostress" environments?
- 10. What are the specific ingredients of information-sharing and control-sharing that have the greatest influence on health and productivity outcomes?

Notes and References

 Moore R., Mao Y., Zhang J., Clarke K. (1997) Economic Burden of Illness in Canada, 1993. Laboratory Centre for Disease Control. Health Canada. Ottawa.

Other studies have taken a more expansive view of costs based on broader criteria. See, for example: Stephens T. and Joubert N. (2001) The Economic Burden of Mental Health Problems in Canada. <u>Chronic Diseases in Canada</u> 22, 1, 18-23; Stephens T., Dulberg C. and Joubert N. (1999) Mental Health of the Canadian Population: a comprehensive analysis. <u>Chronic Diseases in Canada</u> 20, 3, 118-126

- For an excellent review of the enormous range of factors that need to be considered in the context of substance abuse alone, see: Choi B.C.K., Robson L., and Single E. (1997) Estimating the Economic Costs of the Abuse of Tobacco, Alcohol and Illicit Drugs: a review of methodologies and Canadian data sources. Chronic Diseases in Canada 18, 4, 149-165
- 3. Sauter S.L., Murphy L.R. and Hurrell J.J. Jr. (1992) Prevention of Work-Related Psychological Disorders: a national strategy proposed by the National Institute for Occupational Safety and Health (NIOSH). In: G.P.Keita and S.L. Sauter (eds.) Work and Wellbeing: an agenda for the 1990's. American Psychological Association. Washington D.C. pp. 17-40
- Cole D.C., Ibrahim S., Shannon H.S., Scott F.E., and Eyles J. (2002) Work and Life Stressors and Psychological Distress in the Canadian Working Population: a structural equation modeling approach to analysis of the 1994 National Population Health Survey. <u>Chronic Diseases in Canada</u> 23, 3, 91-99
- Health Canada (2002) Fairness in Families, Schools and Workplaces: implications for healthy relationships in these environments. Cat. H46-2/01-251E Minister of Public Works and Government Services Canada. (Thanks to Nora Spinks for the "chill factor" idea).

- French M.T., Zarkin G.A., Bray J.W. and Hartwell T.D. (1997) Costs of Employee Assistance Programs: findings from a national survey. <u>American</u> <u>Journal of Health Promotion</u> 11, 3, 219-222
- 7. See, for example: Hepburn C.G., Loughlin C.A., Barling J. (1997) Coping with Chronic Work Stress. In: B.H. Gottlieb (ed.) Coping with Chronic Stress. The Plenum Series on Stress and Coping. Plenum Press. New York pp 343-366
 - For possible exceptions see chapters 2, 3, 4 in Bennett and Lehman at note 17, below.
- 8. See, for example: Maes S., Verhoeven C., Kittel F. and Scholten H. (1998)
 Effects of a Dutch Work-Site Wellness-Health Program: the "Brabantia"
 Project. American Journal of Public Health 88, 7, 1037-1041
- 9. Pratt D. (2001) The Healthy Scorecard: delivering breakthrough results that employees and investors will love! Trafford Publishing. Victoria. B.C.
- See, for example: Dunnagan T., Peterson M. and Haynes G. (2001) Mental Health Issues in the Workplace: a case for a new managerial approach. Journal of Occupational and Environmental Medicine 43, 12, 1073-1080.
- 11. See, for example: Zohar D. (1995) The Justice Perspective on Job Stress.

 <u>Journal of Organizational Behavior</u> 16, 5, 487-495
- 12. See, for example: Heaney C.A., Price R.H. and Rafferty J. (1995) Increasing Coping Resources at Work: a field experiment to increase social support, improve work team functioning and enhance employee mental health. <u>Journal</u> of Organizational Behavior 16, 4, 335-353
- See, for example: Fox M.L. and Dwyer D.J. (2000) Reducing Stress by Increasing Control. <u>Clinical Leadership and Management Review</u> 14, 3, 114-117

- Miller V.D., Johnson J.R. and Grau J. (1994) Antecedents to willingness to participate in a planned organizational change. <u>Journal of Applied</u> <u>Communication Research</u> 22, 1, 59-80
- 15. Lowe G.S. and Schellenberg G. (2001) What's a Good Job? : the importance of employment relationships. CPRN Research Report. Canadian Policy Research Networks Inc. Ottawa
- 16. A rare example can be found in: Bond F.W. and Bunce D. (2001) Job Control Mediates Change in a Work Reorganization Intervention for Stress Reduction. Journal of Occupational Health Psychology 6, 4, 290-302
- For an overview of such studies, see J.B. Bennett and W.E.K. Lehman (eds.)
 (2002) Preventing Workplace Substance Abuse: Beyond Drug Testing to Wellness. A.P.A. Books. Washington D.C.
- 18. For a user-friendly review of this complex area see: Goleman D. (1995) Emotional Intelligence. Bantam Books. New York. Ch.11