March 2012

Analysis in Brief

The Role of Social Support in Reducing Psychological Distress

Supporting Factors Influencing Health

Summary

Psychological distress is a negative state of mental health that affects many Canadians, both directly and indirectly, over their lifetime through connections with other adverse mental and physical health conditions. At any given point, an estimated one in five Canadians is likely to experience elevated levels of psychological distress.

Social support has been shown to be a consistent protective factor for populations with high distress. However, evidence on the role of the structure and functions of social support in *reducing* distress is lacking. This analysis, based on National Population Health Survey data spanning a decade, examines structures and functions of social support as drivers of reductions in psychological distress.

- The relationship between support and improvements in distress two years later was different for women and men.
- Women who reported regular opportunities to interact and talk with people were significantly more likely to report a reduction in distress than women who didn't feel that they had those supports—a difference not found among men.
- For men in states of high distress, the structure of relationships was important in improvements—for every formerly married man whose distress improved, nearly two married men improved. Being married was not protective for women.

Examples of interventions that can influence distress and other mental health issues through social support–related activities are provided. Some successful approaches focus on individuals' skills at relating, while others provide opportunities for interaction. In some cases, interventions can be integrated with existing health services.

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Production of this report is made possible by financial contributions from Health Canada and provincial and territorial governments. The views expressed herein do not necessarily represent the views of Health Canada or any provincial or territorial government.

Understanding population differences in the role of both social support structures and functions for mental health has implications for shaping information collection and monitoring efforts, as well as for the design, implementation and evaluation of programs to promote mental health.

Introduction

Psychological distress affects many Canadians over their lifetime. One in five Canadians age 15 and older experiences elevated levels of psychological distress.[1] A study of Canadian workers suggested that more than two in five reported one episode of distress and many reported a repeated episode over a six-year period.[2]

Living with distress is associated with developing other mental health conditions, such as depressive and anxiety disorders,[3, 4] and it is also associated with increased risk of chronic and severe physical illness, including metabolic syndrome,[5] coronary heart disease in men[1, 6, 7] and fatal ischemic stroke.[1, 8] Research has examined social and economic factors linked to being or becoming distressed; however, evidence on the factors that help people improve their distress levels is less common. This analysis examines improvements in distress, with a focus on the role of social factors, and highlights related health promotion programs and interventions.

Psychological distress is a non-specific negative state that includes feelings associated with both depression and anxiety.[9] Distress has been characterized by the following attributes: a perceived inability to cope effectively, change in emotion, discomfort, communication of discomfort and temporary or permanent harm to the individual as a result.[10] Although distinct from stress, psychological distress is suggested to be preceded by stressors, such as a demand or unmet needs.[10]

Research has identified several population characteristics as risk and protective factors linked to being or becoming distressed. An elevated distress level or greater risk of the onset of distress is more common among women, those with low income or lower education, unemployed populations and people with compromised physical health.[11–14] Life stressors such as job strain and financial problems, problems with children or neighbourhoods and health concerns have also been associated with distress.[14] Social support has been shown to be a consistent protective factor in distress. It is known to have a mitigating effect on the experience of stress[15] and is linked to lower prevalence of distress[11, 12] and with reduced risk of onset of distress in the Canadian population.[13] Some research shows that as the number of stressors increases, the protective effect of social support on distress also becomes stronger.[15]

Social support can be characterized in various ways. In some cases, support can be defined by the function or purpose of the interaction, such as doing enjoyable things, sharing affection or exchanging advice or information, for example.[16] Canadian research has confirmed the presence of distinct components or functions of social support and furthered that both the English and French versions of the commonly used scale to measure support have been shown to be good measures of the perceived availability of social support in older adults.[17] Social support can also be measured by the structure of specific relationships or the source from which support is obtained—for example, partners, families and friends—and the balance or frequency of contacts.[16, 18] Research on the relationship between types of supports—for example, functional supports and marital status—has shown only moderate relationships and suggests that they do measure different concepts.[16]

The types of social support that are protective against distress can depend on the population. For example, types of social support that were associated with lower prevalence of distress among women were not significant among men, and types of support significantly associated with distress among the general population were not all significant among those with low income.[12, 15, 19] Evidence on the role of social support in *reducing or improving* distress and how this may differ based on the type of support and population appears to be lacking.

This analysis will add to the understanding of psychological distress by examining how both structures and functions of social support contribute to improvements in peoples' experience of distress. Further, sex differences in the role of support are explored in the context of other factors, such as low income, employment and poor physical health, shown in research to be key risk factors. Finally, to connect results to mental health promotion activities, a synthesis of successful interventions presents possible strategies for improving distress levels or related mental health issues through social support.

By providing a better understanding of the relationship between social supports and distress, this population-based study may provide insight and opportunities for other research; population studies, clinical settings and program evaluations might include different dimensions of social support and consider results separately by sex wherever possible. Further, examining similar support and distress concepts across populations, in both clinical and evaluation settings, might enable understanding of what potential unmet needs might be common among populations.

Methods

The analyses that follow examine factors associated with transitions out of high distress, based on information from the National Population Health Survey (NPHS). This longitudinal analysis is based on the adult population age 18 and older who reported high distress at the start of any cycle and had a distress score at follow-up two years later, over the decade beginning in 1998–1999; the result is 2,440 pairs of observations, comprising 1,660 reports by females and 780 from males. This sample population is not representative of the Canadian population at any one point in time; rather it is used to study relationships (see Appendix A for more details on the data source, definitions and methods).

Distress is measured using a six-item scale (K6), which has been validated for use to assess non-specific psychological distress states of individuals in population surveys.[3] Respondents were asked if in the past month they felt sad, nervous, restless or fidgety, hopeless, worthless or that everything was an effort.[20] A score of 9 or more out of 24 was considered high for this analysis, consistent with recent research using the NPHS.[14] Respondents who initially had a score of 9 or greater and who reported a score below this level two years later were considered to have transitioned out of high distress or to have had reductions or improvements in distress.

Over a two-year period distress levels could change multiple times, so the group considered here as having high psychological distress in both periods may not have stayed high.

Social support was assessed using the Medical Outcomes Study (MOS) social support measure.[3, 16] In this analysis, having the selected type of support was based on reports of having someone *all or most of the time* to provide various functions of support, including positive interaction (someone to have a good time with, to get together with for relaxation), affectionate support (having someone to hug you and make you feel wanted) and emotional support (having someone to give you advice or suggestions, to share your private worries with). Tangible support (having others for help with daily living) was not examined in this analysis, as results of a preliminary analysis did not find any significant relationships with distress.

A descriptive profile of respondents who experienced improvements in distress along with those who reported high distress at two consecutive periods is presented in Appendix B. These profiles offer insight into the multiple challenges faced by populations experiencing high levels of distress, particularly those who did not improve. Program planners might use the profiles to determine whether their own populations have similar characteristics or challenges and, therefore, to what extent findings are likely to be relevant to their population.

For both women and men, respondents who stayed in distress appeared more likely than the group who improved to report having government assistance as their income source, being in the lowest income group, being not in the workforce, and having multiple chronic conditions and activity restriction. Respondents who did not improve were also less likely to report social supports than those who reported improvements. Fewer men seemed to report social supports than women. For women, marital status was reported in similar proportions by the populations who did and did not transition out of high distress. Among men who did not experience reduced distress, a larger proportion was formerly married than among respondents reporting improvements.

The following analysis examines the role of different forms of social support in predicting improvements in psychological distress. In addition, sex differences in the social support and distress relationship are also explored.

Results

Positive Interaction and Emotional Support Predict Improvements in Distress; Affectionate Support Does Not

People's perception of having available emotional support or positive social interaction opportunities was associated with experiencing improvements in distress levels after adjusting for age, income, employment and health behaviours. Affection-related social support was not a significant factor in transitions out of psychological distress (Table 1).

There was also no significant difference in reporting improvements in distress for married populations compared with single and formerly married people. While women and men had no significant difference in the chances of experiencing improvements in distress, the factors associated with improvements did differ by sex; however, when analyzed by sex, marital status became significant (Table 2). (For further discussion of income, employment and other health-related factors, see the box on determinants associated with distress.)

Table 1: Adjusted Odds of Experiencing Improvements in Distress by Type of Social Support

	Affectionate Support		Positive Interaction Support		Emotional Support	
(n = 2,440)	Odds	p-value	Odds	p-value	Odds	p-value
Male (vs. Female)	**1.30**	0.06	**1.31**	0.06	**1.32**	0.05
Age 18–34 (vs. 35–54)	**1.28**	0.13	**1.26**	0.15	**1.29**	0.11
Age 55+ (vs. 35–54)	**1.25**	0.20	**1.24**	0.21	**1.23**	0.22
Married/Common-Law (vs. Widowed/ Separated/Divorced)	**0.91**	0.53	**0.89**	0.43	**0.91**	0.52
Single (vs. Widowed/ Separated/Divorced)	**0.91**	0.60	**0.89**	0.49	**0.89**	0.49
Consulted on Mental Health in Last Year (vs. Did Not)	**0.68**	0.00	**0.69**	0.00	**0.68**	0.00
Restricted Activity (vs. No Reported Restriction)	**0.68**	0.00	**0.68**	0.00	**0.68**	0.00
Middle Income (vs. Low Income)	**1.50**	0.01	**1.49**	0.01	**1.47**	0.02
High Income (vs. Low Income)	**1.84**	0.01	**1.79**	0.02	**1.82**	0.01
Employed (vs. Unemployed/Not in Labour Force)	**1.16**	0.31	**1.14**	0.36	**1.15**	0.32
Active or Moderately Active (vs. Inactive)	**1.08**	0.54	**1.06**	0.64	**1.07**	0.56

Table 1: Adjusted Odds of Experiencing Improvements in Distress by Type of Social Support (cont'd)

(n = 2,440)	Affectionate Support		Positive Interaction Support		Emotional Support	
	Odds	p-value	Odds	p-value	Odds	p-value
Non-Smoker (vs. Occasional or Regular Smoker)	**1.38**	0.02	**1.38**	0.02	**1.38**	0.02
Affectionate Support (High vs. Lower)	**1.25**	0.07				
Positive Interaction Support (High vs. Lower)			**1.44**	0.00		
Emotional Support (High vs. Lower)					**1.34**	0.02

Notes

Shading indicates factors that are significantly associated with experiencing improvements in distress ($p<0.05$).

Adjusted odds ratio represents the odds of reporting a transition out of distress for the population reporting the selected characteristic, compared with the indicated reference group, adjusting for other factors listed. For example, an adjusted odds ratio of 1.38 means that the odds of improving were 38% higher for non-smokers than for smokers; put another way, 1.38 non-smokers improved for every smoker.

Source

CIHI Analysis of National Population Health Survey, 1998–1999 to 2008–2009, Statistics Canada.

Positive Interaction and Emotional Support Linked to Improvements in Distress for Women but Not Men

Analyses examined, in more detail, the role of positive interaction and emotional support in improvements in distress separately for women and men (Table 2). Having people to both do things with and to talk to were important in reporting transitions out of high distress among women. The odds of reporting improvements in distress were 66% higher for women who felt that they had positive social interaction support, compared with those who did not feel they had the support. In other words, distress improved for 166 women who felt that they had positive social interaction support, for every 100 women who did not have that support. For emotional support, the odds were 46% higher for women reporting having support. There was no significant association with improvements in distress for either type of functional support for men.

Table 2: Adjusted Odds of Experiencing Improvements in Distress by Type of Support and Sex

	Women (n = 1,660)				Men (n = 780)			
	Positive Interaction Support		Emotional Support		Positive Interaction Support		Emotional Support	
	Odds	p-value	Odds	p-value	Odds	p-value	Odds	p-value
Age 18–34 (vs. 35–54)	**1.42**	0.06	**1.48**	0.04	**0.87**	0.69	**0.87**	0.66
Age 55+ (vs. 35–54)	**1.44**	0.09	**1.44**	0.09	**0.86**	0.60	**0.86**	0.60
Married/Common-Law (vs. Widowed/Separated/Divorced)	**0.67**	0.03	**0.69**	0.05	**1.90**	0.04	**1.86**	0.04
Single (vs. Widowed/Separated/Divorced)	**0.71**	0.13	**0.71**	0.13	**1.57**	0.20	**1.56**	0.20
Consulted on Mental Health in Last Year (vs. Did Not)	**0.75**	0.08	**0.73**	0.05	**0.60**	0.02	**0.60**	0.02
Restricted Activity (vs. No Reported Restriction)	**0.71**	0.02	**0.71**	0.03	**0.56**	0.02	**0.57**	0.02
Middle Income (vs. Low Income)	**1.45**	0.04	**1.43**	0.05	**1.66**	0.12	**1.66**	0.12
High Income (vs. Low Income)	**1.88**	0.02	**1.96**	0.01	**1.80**	0.19	**1.79**	0.19
Employed (vs. Unemployed/Not in Labour Force)	**1.20**	0.31	**1.23**	0.24	**1.03**	0.89	**1.03**	0.91
Active or Moderately Active (vs. Inactive)	**0.99**	0.97	**1.02**	0.92	**1.18**	0.45	**1.18**	0.46
Non-Smoker (vs. Occasional or Regular Smoker)	**1.47**	0.02	**1.49**	0.02	**1.21**	0.41	**1.21**	0.41
Positive Interaction Support (High vs. Lower)	**1.66**	0.00			**0.98**	0.92		
Emotional Support (High vs. Lower)			**1.46**	0.01			**1.06**	0.81

Note

Shading indicates factors that are associated with experiencing improvements in distress ($p<0.05$).

Source

CIHI Analysis of National Population Health Survey, 1998–1999 to 2008–2009, Statistics Canada.

Being Married or in Common-Law Relationship Consistently Linked to Transitions Out of Distress Among Men but Not Women

Analyses showed that men who were married or in a common-law relationship had nearly two times the odds of reporting improvements in distress compared with formerly married males (adjusted odds ratio of 1.90 when adjusting for positive interaction support, and adjusted odds of 1.86 when controlling for emotional support). In other words, for every formerly married man whose distress improved, nearly two married men improved after adjusting for other factors (Table 2). However, among women, improvements in distress were less likely for those who were married, compared with women who were widowed, separated or divorced, after adjusting for types of functional social support and other factors.

What Are Positive Interaction and Emotional Support?

Analyses examined the questions that make up positive interaction and emotional support components in more detail to highlight examples of what specific dimensions may be important for improvements among women, as well as to determine whether any of the individual questions were associated with improvements among men. Another goal of this analysis was to provide opportunities to connect results with other single questions used in clinical studies or in other population or evaluation research.

For all but 1 of the 12 specific questions, women who felt they had opportunities for the selected social support all or most of the time were significantly more likely to report improved distress two years later, compared with women who reported having the selected support less often (Table 3). Of note, having someone to do something enjoyable with was associated with transitioning out of high distress for women, whereas having someone to have a good time with, while similar, was the only question not significant for improvements in distress. While no single question was clearly linked with later improvements in distress among men, the only item not significant for women (having someone to have a good time with) was the only question that approached significance for men (p = 0.06).

Table 3: Adjusted Odds of Experiencing Improvements in Distress by Social Support Question and Sex

How Often Is Each of the Following Kinds of Support Available to You if You Need It? *(All or Most of the Time vs. Less Often)*		**Adjusted Odds of Improvements**		
		Both Females and Males	Females	Males
Positive Interaction	Someone to Have a Good Time With	1.33	1.23	1.48
	Someone to Get Together With for Relaxation	1.49	1.64	1.16
	Someone to Do Things With to Help Get Your Mind Off Things	1.46	1.66	1.05
	Someone to Do Something Enjoyable With	1.57	1.80	1.15
Emotional Support	Someone You Can Count on to Listen to You When You Need to Talk	1.41	1.57	1.13
	Someone Who Understands Your Problems	1.30	1.42	1.05
	Someone to Give You Information to Help You Understand a Situation	1.30	1.43	1.04
	Someone to Confide in or Talk to About Yourself or Your Problems	1.48	1.68	1.15
	Someone to Give You Advice About a Crisis	1.22	1.40	0.88
	Someone to Give Advice	1.21	1.34	0.92
	Someone to Share Your Most Private Worries and Fears With	1.35	1.67	0.87
	Someone to Turn to for Suggestions About How to Deal With a Problem	1.31	1.55	0.94

Note

Shading indicates factors that are associated with experiencing improvements in distress in the full model, adjusting for age, marital status, income, employment, activity restriction and consulting on mental health ($p<0.05$).

Source

CIHI Analysis of National Population Health Survey, 1998–1999 to 2008–2009, Statistics Canada.

Discussion: Putting Results in Context

Analyses showed that the role of social support in predicting improvements in distress differed based on the type of support and the sex of the population. Women had higher prevalence and incidence of distress and were more likely than men to experience high levels of distress.[1, 18] In addition, women have been found to be twice as likely as men to experience multiple episodes of distress.[19] In this analysis, more than two-thirds of the responses—those indicating elevated distress at the start of any 2-year period over 10 years—were female (1,660 of 2,440 observations). Although more likely to be in distress at a given point in time or to experience repeated episodes, the results of this analysis suggest that women were about as likely as men to transition from a high level of distress to a lower level.

In the results presented here, being married or in a common-law relationship was an asset for experiencing improvements in distress for men, but not for women. Research on current levels and on the onset of distress shows mixed results when examining marital status but generally finds being married to be an asset. Research that considered women and men together found that those who were single or formerly married were more likely to report the onset of single and multiple episodes of distress compared with married people.[19] Another study found that formerly married or never married men and women were more likely to have distress than the married group, but marital status was not a significant predictor of changes in distress score over time for either sex.[15] Research on other forms of structural support showed that support measured by the number of close friends and relatives was not a significant predictor of subsequent distress levels.[21]

Research has shown that the association between functional types of social support and distress depends on the type of support and the population, and further that all forms of social support are not necessarily related to distress.[12, 15, 21] Positive interaction and emotional support were associated with lower prevalence of psychological distress in both low-income and non–low income populations. However, tangible support, indicated by having material help with meals and chores in case of incapacity, which was significant for the non–low income group, was not a significant protective factor for the low-income population.[12] For both women and men, emotional support was shown to act as a buffer against stressors and be protective against current distress. However, results that predicted future distress showed that emotional support was a significant protective factor for women only, not for men.[15] This appears similar to results presented here, which focused only on changes from high distress to lower levels, where emotional support was a determinant of improvements in psychological distress for women but not for men.

Research has also explored sex differences in the experience of life stresses, which are associated with current distress and the onset of distress. Sex differences in these stressors and their link to distress may offer further context for the sex differences in the role of social support in transitions out of distress. For example, among women, but not men, problems with children and recent life events were significant predictors of becoming distressed. For men, neighbourhood problems were significant stressors linked to distress—a factor not found for women. For both sexes, job strain and financial problems were stressors linked to distress.[14]

Broader Determinants Associated With Psychological Distress

While the focus of this study was on the role of social support in improvements in distress, the analysis also considered the role of other social determinants of health that have been identified in the literature as related to current distress or the onset of distress, to explore their relationship to improvements in psychological distress (tables 1 and 2).

Income: Research found that low income groups were more than twice as likely to experience multiple episodes of psychological stress as the highest income group.[19] Part, but not all, of the relationship between low income and psychological distress can be explained by the higher prevalence of stressors in the low-income population.[14] This analysis of improvements among people experiencing elevated distress shows that higher income groups were significantly more likely to report a transition out of distress two years later than the lowest income group. This relationship holds even after accounting for other factors, including social support. Research has suggested that a higher absolute income amount is not associated with lower distress among those already in the lowest income group.[1] The impact of changes in income on improvements in mental health may be an avenue for future research.

Employment: Source of income is also related to distress. A British study on employment transitions demonstrated the positive effect of employment on distress. Individuals returning to work after an absence are less likely to experience distress than those who remain in unemployment; similarly, moving from employment to unemployment is associated with increased likelihood of high distress.[22] This relationship is mediated by perceived financial difficulties from the transition. Returning to work results in an improvement in distress, and becoming unemployed has a negative impact, only if the change in employment status is accompanied by concern about financial difficulty.[22]

A study of Canadian workers showed that social support at work was protective against the onset of psychological distress and was associated with fewer repeated episodes, controlling for other characteristics of the individuals and their work environment.[2, 13] Analyses presented here explored the association between employment and improvements in the level of distress, but the presence of social support at work and how that might determine improvements in the employed population was not considered. In addition, the analysis did not consider possible negative elements of social relationships and the absence of social support in work environments, which are known to be risk factors for psychological distress.[18]

Health behaviours and physical health: Research showed that being a smoker was associated with existing distress for women but not as consistently for men, depending on what stressors were considered for men.[15] Similarly, results of this analysis showed that being a non-smoker was associated with reporting improvements in distress, for women in particular or when considering both sexes together.

This analysis did not find physical activity to be a significant predictor of improvements in distress. This appears to be consistent with research examining changes in distress, in which being inactive was not a significant factor.[15] Research on seniors has shown that physical activity is associated with distress in the population age 65 and older, where increased physical activity was associated with lower levels of distress.[23] Part of the relationship between physical activity and distress was also found to be linked to changes in reported activity restrictions.[23] In this analysis, activity restriction was a consistent physical health barrier to transitions out of distress for both women and men and was controlled for in considering the relationship between social support and improvements in distress.

Health services: People who consulted on their mental health in the past year were less likely to report improvements in psychological distress than the group who did not report seeking help. This finding does not necessarily reflect the impact of mental health services on distress levels, but rather that consulting on health may indicate the severity of distress. That is, those with more severe distress might be more likely to connect with professional help. Research has shown that people reporting multiple episodes of high distress in the 10-year period beginning in 1994–1995 were more likely to have consulted on their mental health than those who were never distressed (35% versus 5%). The group reporting multiple episodes of high distress averaged more than 14 visits.[19] Two-thirds of those experiencing distress (65%) reported that they had not consulted on their mental or emotional health in the past year,[19] which may also indicate an unmet need for mental health services.

Intervention: Areas for Action on Social Support to Improve Distress

Building on the results of the data analysis, this section reviews research on interventions that improve social support to improve distress and related mental health issues. For both women and men, social support is a determinant of transitions out of high distress—in the form of the functions of positive social interaction and emotional support for women and in the structures of relationships with partners for men. Recognizing how social support is defined and accessed by females and males can inform responses to the needs of particular populations.

Although there is support for intervention among different populations, research tends to focus on populations that are at higher risk, such as elderly populations or people with chronic health conditions. The findings presented here are a selection from recent systematic reviews about effective interventions and activities that have been the subject of research or evaluation demonstrating a positive impact on participants. The experiences captured in single-intervention studies and case examples are further possibilities for drawing lessons and learning across settings, populations and jurisdictions (see Appendix C for more a detailed description of the policy synthesis method).

Building Social Support Through Individual Skill

Interpersonal therapy focuses upon the individual's current relationships with other people.[24] Interpersonal therapy is associated with social outcomes, including improved individual social functioning and a higher quality of relationships.[25] Findings from numerous reviews conclude that this method is effective in reducing depression[26] and reducing the risk of relapse into depression, if therapy is continued over time.[25] Research indicates support for the use of interpersonal therapy among particular populations that face a higher risk of mental illness and barriers to accessing care.[27, 28] These groups include women of low socio-economic status[28] and seniors,[27] groups that also face barriers to care.

Enhancing Close Supportive Relationships

Using the experience of close relationships as a mediating social support structure,[29] the goal of marital therapy is to change patterns of interaction within a couple, through regular sessions of structured intervention by a trained therapist.[29] Marital therapy is associated with reduced and less persistent marital distress and with reduced depressive symptoms, compared with individual therapy.[29] Findings are not reported by sex, although in the included studies women were the majority of the participants with depression. Other therapies—for example, family-focused therapy—are also associated with improved interactions inside a family unit.[25]

Providing Opportunities for Support in Conjunction With Other Health Services

Another method of improving opportunities for interaction is through support groups tailored to a particular group, sometimes defined by a health condition. For example, for individuals with cancer, support groups are associated with improvements in anxiety and depression, enhanced quality of life and marital relationships.[30] Participation in a group program can have impacts beyond the therapeutic effect of prevention or treatment; multiple studies identify benefits apart from the impact of the condition-specific therapy.[31, 32]

Reducing Isolation by Improving Social Support

Research findings suggest a positive effect from support groups on social isolation among older adults.[33] In a review of health promotion for older adults, group programs were found to be effective in reducing social isolation and loneliness,[34] where individual formats were not successful.[34]

One such example is the Program to Encourage Active, Rewarding Lives for Seniors (PEARLS), which started in Seattle, Washington. Recognizing that social isolation and depression among older adults are associated with multiple chronic disease comorbidities and limited mobility, PEARLS provided individual therapy focused on exploring new, pleasant social and physical activities.[35] As part of the program, a psychiatrist would occasionally contact the individual participants or their primary care providers to clarify particular risks and treatment options; this included advice or recommendations about drug therapies.[35] Participation in PEARLS was associated with reduced depression symptoms and increased likelihood of complete remission of depression, compared with usual care, at a follow-up after 12 months.[35]

Opportunities in Monitoring: Considering Sex Differences, Measuring Social Support and Mental Health in Different Populations

Areas for intervention to improve social support and distress also include opportunities for building better information to inform decisions. One opportunity for consideration based on this analysis that may help strengthen evidence is examining sex differences in social support and mental health. Despite recognizing the need to tailor interventions for a specific population group, only a small number of reviews consider participants' sex in terms of the appropriateness and effectiveness of the intervention. Several systematic reviews note the ratio of females to males in the description of study populations; with population surveys, populations with poor mental health, and thus the populations studied in the research on mental health interventions, have higher proportions of women.[28, 29] Some reviews include studies of both women and men but, in general, the majority of studies examine female-only or predominantly female participants.[29, 30, 33, 36] One review reported an association between the percentage of male participants and the program effect size.[37] A few reviews suggest unclear associations between sex and improved mental health outcomes, complicated by the often small sample of males.[38] None of the reviews examined reported sex-specific effectiveness of interventions, but the findings from analyses presented here highlight the need to stratify monitoring by sex and tailor programming for women and men.

The data analysis findings demonstrate that not all dimensions of social support are significant for all populations. This highlights the importance of monitoring various dimensions of available social support—for example, both the functions and the structure of relationships themselves—in establishing unmet needs that, if recognized, might lead to improved health or health care management. The collection and management of the data that informs that programmatic planning is also determined by policy. The ability to plan appropriate programming for prevention and treatment is contingent upon an accurate assessment of individual needs and the needs of the population.

Measuring and monitoring social support can be challenging. Social supports, of the kind presented in these analyses, are measures of an individual's perceived supports. Theories of social capital propose that close relationships are organized by looser associations in communities and networks;[39–41] measurements for this concept include, among others, the density of participation in voluntary activities and the perception of trust.[42] No known interventions directly address social supports measured at more aggregate levels, such as a neighbourhood or community at large. Nonetheless, broad social, environmental and economic factors beyond the characteristics of an individual service user also contribute to health and illness.[43] In contrast, this analysis focuses on the effect of the perceived support of individuals, rather than the impact from or development of a broader socio-ecological phenomenon.

Mental Health Data—Information as Intervention

This analysis used data from a national survey that samples a representative population at regular intervals over time. The results of analyses from a population sample survey can be interpreted as relevant to a range of Canadians. Data was collected from the same individuals at multiple time points, which enables the longitudinal nature of the analyses; alternatively, data taken at a single point in time can be useful for describing a current state. In addition to identifying the needs and assets of an individual consumer, administrative data collected by service providers in assessments can be used to measure the status and trends in a specific group or in an area.

Data from other sources can also inform these kinds of analyses. The Ontario Mental Health Reporting System (OMHRS) was established by the Canadian Institute for Health Information (CIHI) in 2005 through a partnership with the Ontario Ministry of Health and Long-Term Care to enable standardized data collection and reporting for adult inpatient mental health services in Ontario. The data submitted to CIHI for the purposes of OMHRS is collected by hospital staff using a standardized clinical assessment instrument known as the Resident Assessment Instrument–Mental Health (RAI-MH©).

The RAI-MH collects information about factors that influence health—for example, stressors and social relations—as well as the baseline health condition of the individual.[44] The RAI-MH is a standardized data collection tool used for inpatient mental health populations that ensures consistency in collection. This tool can be used for assessment and clinical purposes, as well as for purposes related to analyzing patient outcomes, monitoring progress and evaluating programming. Given the potential for use of data for clinical purposes as well as planning, this data is relevant to many different stakeholder groups, such as clinicians, unit and facility managers, governments, system-level planners and researchers.

For more information about OMHRS, visit www.cihi.ca/omhrs or send an email to omhrs@cihi.ca.

In summary, the findings from systematic reviews highlight that low levels of social support can be addressed in different contexts, such as programming and treatment services. Effective therapies can develop individuals' skills at relating and also provide opportunities for interaction. These examples of supports can be integrated into or enhanced in existing programming for populations that experience or face higher risk of distress. Results about integration and coordination of care suggest the need for ongoing assessment and contact between care providers and individuals experiencing, or at risk of, distress. Finally, opportunities exist for building better evidence on social support and distress, by measuring different dimensions of support where possible and considering sex and gender differences in population, clinical or evaluation studies.

Conclusions

Supportive social relationships are important in the reduction of high psychological distress levels, although in different forms. Emotional support and positive social interaction, as used in these analyses, express the function of a relationship; marital status can also reflect a type of available social support, but it represents the structure of a relationship or source of support. In this way, social supports are assets for transitions out of distress for both women and men.

Research often considers how various determinants are associated with illness or the onset of illness, often for both women and men together. The factors associated with the onset or experiences of illness, however, are not necessarily the determinants related to recovery. Further, that women and men benefit from different elements of relationships emphasizes the need to include gender among the social factors influencing health and mental health, to better understand how needs vary. Similarly, programs that foster social support can have positive impacts on mental health outcomes, although more clarity is needed about the outcomes from interventions for women and men.

Acknowledgements

The Canadian Institute for Health Information (CIHI) would like to acknowledge the individuals and organizations that contributed to this report. Margot Shields at Statistics Canada provided advice in the development phase of the analysis. External experts who provided feedback and advice on the report and analysis include the following:

Heather Orpana, PhD, Senior Research Analyst, Public Health Agency of Canada

Mike O'Shea, Mental Health Lead, North East Local Health Integration Network, a representative on the CCIM—CAP-MH Advisory Group

Current and former CIHI staff involved in the development of this analytical product include Caryn Pearson, Emily Maddocks, Lisa Corscadden, Keith Denny, Mélanie Josée Davidson, Andrew Taylor, Sushma Mathur, Jean Harvey, Eric Pelletier, Catherine Fraser, Ian Joiner and Nawaf Madi.

Appendix A: Data Source, Definitions and Methods

The NPHS began in 1994 and collects information about health and potential determinants of health. The survey cycles used excluded persons living in institutions, on Reserve and Crown lands, on Canadian Forces bases, in the territories and in some remote areas.[45] The analysis focused on the population age 18 and older who reported high distress at any cycle and had a response to distress questions two years later. Collection of social support scale questions began in 1998; therefore, the study period is from 1998–1999 to 2008–2009. The result is a sample of 2,440 pairs of observations across two-year periods. The sample is used to study relationships and is not representative of the Canadian population at any one point in time. The following variables were used in the analysis.[20]

- *Psychological distress:* Distress was based on the Kessler six-item psychological distress scale, for which respondents were asked if in the past month they felt sad, nervous, restless or fidgety, hopeless, worthless or that everything was an effort. A score of 9 or more out of 24 was considered high for this analysis.
- *Household income:* Income categories were based on household income and size. Annual household income of less than $15,000 for a household of one to two persons or less than $30,000 for a household of five or more was categorized as low, for example. For more information on income classifications, see NPHS documentation. Missing income was categorized separately and included as such in the analysis but was not reported in the results. Preliminary analyses examined the impact of changes in income on transitions out of high distress; however, there were challenges in defining income changes over time and in finding an adequate number of cases with meaningful improvements in income.
- *Non-smokers:* Respondents who reported not smoking at all were classified as non-smokers.
- *Active:* Leisure time physical activity was based on reports of frequency and duration of activities. Based on other research, moderately active and active categories were combined as “active” and compared with the “inactive” population.
- *Income source:* Income sources were combined into three groups: wages/salaries/self-employment income; government assistance, which includes income from unemployment insurance, workers’ compensation, child tax benefit and provincial or municipal social assistance or welfare; and retirement income, including income sourced from the Canada or Quebec pension plans, retirement pensions and old age security. All other sources were grouped in an “other” category.
- *Employed:* Three categories of employment were included: employed, unemployed and not in the labour force.
- *Mental health service contact:* This variable looked at those who consulted with a health professional about their mental health over the past 12 months.
- *Activity restriction:* This variable considered those who reported having a long-term disability or limitation in daily activity.
- *Number of chronic conditions:* Categories of zero, one, and two or more chronic conditions were derived based on responses to being diagnosed by a health professional with any of 22 chronic conditions.

Social support questions were based on the MOS.[16, 20, 46] Tangible support was also part of the MOS scale but was not examined in this analysis.

- *Positive interaction* was indicated by responding “all or most of the time” to all four questions: having someone to have a good time with, to get together with for relaxation, to do things with to help get your mind off things and to do something enjoyable with.

- *Affection* was defined by responses of “almost always or most of the time” to four questions, including having someone to hug you, love you and make you feel wanted.
- *Emotional support* was defined by responses of “almost always or most of the time” to eight questions about emotional and informational support, from having someone to give you advice or suggestions to having someone with whom to share your most private worries and fears.

Descriptive analysis was undertaken to examine the characteristics of the populations who did and did not transition out of high levels of psychological distress, by sex and by dichotomous income level. Multiple logistic regression models examined the role of social support in predicting improvements in distress two years later, controlling for other factors. The analysis was done separately by sex and by type of support. The pooled sample had some repeated records; however, the estimation of variance using the bootstrap technique adjusted for this duplication. There were limitations in finding statistical significance of results that appeared to be associated with improvements for small populations of males. Preliminary analysis ruled out any consistent differences due to cycle year or rural versus urban location. Therefore, these factors are not examined in detail; however, this assumes that the factors related to improvements in distress did not vary widely between geographic locations and over the time period considered.

Appendix B: Sample Profile Description

Table B.1: Characteristics of Respondents With Elevated Distress, by Sex and Distress Status Two Years Later

	Females (n = 1,660)		Males (n = 780)	
	Improved	No Improvement	Improved	No Improvement
Age 18–34	37%	32%	35%	30%[E]
Age 35–54	39%	47%	46%	48%
Age 55+	24%	21%	19%	23%[E]
Married/Common-Law	48%	48%	48%	38%
Single	28%	27%	36%	32%
Widowed/Separated/Divorced	24%	23%	15%	26%[E]
Wages, Salaries, Self-Employment Income Source	69%	61%	73%	57%
Government Assistance	7%	15%[E]	6%[E]	19%[E]
Retirement	15%	17%	14%	17%[E]
Low Income	17%	25%	13%	26%[E]
High Income	19%	12%[E]	26%	19%[E]
Highest Level of Education High School or Less	37%	42%	33%	38%
University Degree	14%	11%[E]	14%	20%[E]
Unemployed	6%	5%[E]	11%[E]	6%[E]
Not in the Workforce	38%	46%	26%	42%
Active or Moderately Active	37%	34%	46%	41%
Non-Smoker	65%	54%	58%	50%
Two or More Chronic Conditions	57%	64%	40%	54%
Restricted Activity	38%	50%	37%	56%
Consulted on Mental Health in Last Year	35%	45%	26%	41%
Affectionate Support	68%	60%	51%	45%
Emotional Support	59%	48%	41%	35%
Positive Interaction Support	58%	43%	45%	39%

Note

E High sampling variability (coefficient of variation >16.6%).

Source

CIHI Analysis of National Population Health Survey, 1998–1999 to 2008–2009, Statistics Canada.

Appendix C: Policy Analysis Methods

A review of peer-reviewed research literature on social support interventions for reducing distress was conducted. The literature search was structured with key terms and synonyms of “distress” (including depression, anxiety, mental illness and others), in combination with “reducing social isolation” or “improving social support.” Search terms included the three functional social support components considered in the data analyses—emotional, affection and positive interaction—as well as synonyms and related keywords. Of the results published in English since 2005, systematic reviews and meta-analyses related to interventions were ordered and full texts were reviewed for relevance.

The research on interventions for improvement of mental health and reduction of mental illness is extensive. Systematic reviews consolidate and compare the findings from multiple studies of a similar topic. Within the research there is notable variability in study design. For example, studies vary by population characteristics (for example, baseline condition, age and demographics of study population) and by outcome of interest (for example, depression, anxiety, psychological distress). Given this variability, which is a challenge to generalizing findings, systematic reviews often include minimal information about the context of the intervention. Similarly, sex is one of many possible variables and is not always included in the original analyses, which limits the ability of review authors to consider sex in their synthesis. In the absence of consistent data and large sample sizes, some reviews highlight the lack of data and need for future research as a finding in itself.

This synthesis focuses on interventions that act on social support to reduce mental illness. In this review, intervention refers to a range of strategies to alter the physical or social environment.[47] This includes legislative or regulatory action by institutions (that is, policy) but is not limited to such. Few studies of social support interventions for distress and depression have evaluated social support; interventions build on the role of social support as a determinant of the mental health outcome and focus on mental health or illness outcomes as measures of success.

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