A B S T R A C T

The closure of the east coast fishery in Canada in 1992 has affected the lives of individuals and communities both directly and indirectly, causing massive unemployment. Previous research indicates that unemployment negatively affects people's health and other aspects of family functioning. This study assesses the perceived effects of unemployment on the individuals' health, and compares the psychological well-being of the employed and that of the unemployed individuals in the same communities affected by the cod moratorium.

The sample consisted of 681 individuals, 16 years of age and older from randomly selected households. They were individually interviewed using structured questionnaires. The GHQ-28 with a high test-retest coefficient (0.90) and split-half reliability (0.92) was used to measure the psychological well-being.

The unemployed reported more stress, boredom, high level of uncertainty, less satisfaction with themselves, their life, their educational level, income and health. Implications for health promotion, policy formulation and future research are put forward.

A B R É G É

La fermeture de la pêche sur la côte est canadienne, en 1992, a touché directement et indirectement la vie des individus et des communautés, causant un chômage massif. Des recherches menées antérieurement montrent que le chômage mine la santé et d'autres aspects de la vie familiale. Cette étude vise à : 1) évaluer les effets perçus du chômage sur la santé des gens; 2) comparer le bien-être psychologique des travailleurs et des chômeurs vivant dans les mêmes communautés touchées par le moratoire sur la pêche à la morue.

L'échantillon se composait de 681 individus, âgés de 16 ans et plus et provenant de ménages choisis au hasard. Ils ont été interviewés individuellement à l'aide de questionnaires dirigés. Le GHQ-28, qui présente une constance test-retest (0,90) et une corrélation d'homogénéité (0,92) élevées, a été utilisé pour mesurer le bien-être psychologique.

Les chômeurs ont déclaré ressentir plus de stress et d'ennui, beaucoup d'incertitude et moins de satisfaction par rapport à eux-mêmes, à leur vie, à leur niveau de scolarité, à leur revenu et à leur santé. On présente les répercussions de ces phénomènes sur la promotion de la santé, la formulation de politiques et l'avenir de la recherche.

Land and Sea Connection: The East Coast Fishery Closure, Unemployment and Health

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The cod fishery collapse, which affects not only Newfoundland but all of the Atlantic provinces of Canada, began in the summer of 1992, first involving the cod fishery, then other ocean species. It may not reopen for a long time. Newfoundland coastal communities may have been most severely affected since for centuries, fishing has been their main livelihood. Most families are connected with the fishery either directly or indirectly as fishers or fish plant workers, fish sellers, fish transporters or as employees in related business. Thus, often the whole family derives their income from the fishery. In addition to providing stable food and a good source of income for coastal communities, fishing has been a way of life for centuries, a source of social and cultural identity. People develop a close relationship with the sea, which is a life giver and a life taker. Although fish landings vary from year to year, the ocean resources have been perceived as endless.

The cod fishery closure resulted in massive unemployment, and loss of the main source of income for 10,000 fishers and 12,400 plant workers in 400 coastal communities across Newfoundland and Labrador.¹ This job loss was considered the largest in Canadian history and has pro-

pelled the already high unemployment rate in Newfoundland to an even higher level.

In addition to financial hardship, these individuals also lost a way of life which has given them a sense of identity, a sense of purpose. Despite federal government financial assistance under the Atlantic Groundfish Strategy (TAGS) – commonly known as the “package” – long-term sustainability is quite uncertain. With limited education and little skill, these individuals have a much reduced chance of obtaining employment in other sectors. Many lost not only their job but their whole lifelong investment in fishing gear, boats and other equipment which are now of little use.

The purpose of this study was to find out how people coped with the situation and whether their health has been affected. In particular, the study aimed to: 1) assess the perceived effects of unemployment on the individuals' health, and 2) compare the state of psychological well-being of the employed and that of the unemployed individuals in the same communities affected by the cod moratorium.

Literature review

In published literature, employment has been seen as an important determinant of health. Health has been more broadly defined in keeping with the current international movement to consider the social, economic and environmental determinants of health. Health depends not only on the availability of health services, but also on such other factors as income, education, employment and social support.²

Published research has provided ample evidences of detrimental effects of unemployment on mental, physical, and social well-being of individuals, family and community.³ Unemployment creates life stress

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This study is part of the larger interdisciplinary research project entitled “Sustainability in a changing cold ocean coastal environment”, funded by Environment Canada through the Green plan and administered by the three academic councils: Social Sciences and Humanities Research Council of Canada (SSHRC), the Natural Sciences and Engineering Research Council (NSERC) and the Medical Research Council (MRC).

by disturbing a person's sense of identity and self-esteem and by disrupting social networks. It also results in poor diet, poor mental and physical health and a myriad of social problems.³ The unemployed often complain of feeling ill and rundown, having bad tempers, sleeping problems, feeling less useful, unable to enjoy day-to-day activities and having more arguments with spouses and others.⁴ Thus, the toll of unemployment extends not only to the persons directly affected, but also to their spouses/partners, children and family members who share both the emotional and financial strain.⁵⁻⁷

METHOD

This study involved 23 communities on the Bonavista headland of Newfoundland where the economy depended heavily on the fishery, and thus whose inhabitants were among those affected directly by the economic downturn. The sample consisted of 681 individuals (48.4% male, 51.6% female), 16 years and older from randomly selected households, using the telephone list. The sample consisted of almost 10% of the total population of the area. Each person was interviewed individually, in his/her own home, using two instruments: a questionnaire designed by the researchers, assessing life satisfaction, stress level and other health indicators; and the General Health Questionnaire (GHQ-28), identifying current, diagnosable psychiatric disorders among respondents in the community settings. The GHQ-28 was the more thoroughly tested tool, used in many previous studies on unemployment in various countries (test-retest coefficient = 0.90, split-half reliability = 0.92).⁸ It had four subscales: somatic symptoms, anxiety/insomnia, social dysfunction and depression. A higher score for the GHQ indicated more psychological distress.

Data collection was carried out in the spring of 1995, almost three years after the fishery closure began.

RESULTS

Employment status

The unemployment rate in the area was 42.7% (Table I). Unemployment was

TABLE I Employment Status (n=681)				
Employment Status	Frequency	%	NF (1995)	Canada (1995)
Employed (full-time or part-time)	152	22.3		
Unemployed (looking for a job)	291	42.7	18.6%	8%
Retired	117	17.2		
Keeping house	68	10.0		
Student	53	7.8		
TOTAL	681	100		

TABLE II					
Demographic Characteristics of the Employed and Unemployed in the Studied Area					
		Employed n=152	Unemployed n=291	p level	Canada (1991 Census)
Sex	Male	43.4%	59.5%		
	Female	56.6%	40.5%		
Mean age		39.8	37.5	0.04	
Mean years of schooling		12.3	10.5	0.0000	
Fishers/fishplant workers		14.5%	54.3%		
Total average household income before deduction		\$39,600	\$28,100	0.0000	\$46,137
Respondent's average income before deduction		\$19,100	\$11,600	0.0000	

defined as "looking for a job". Compared with Canada's overall unemployment rate (8%) and that of Newfoundland in general (18.6%) at that time, this coastal area was facing an enormous economic problem. The true unemployment rate in the studied area might be even higher because those who were forced to retire, those who gave up looking for a job or those who claimed to be "keeping house" were not included in the unemployed subgroup.

Table II describes the characteristics of the employed and the unemployed subgroups in this sample. The unemployed subgroup was slightly younger but in the prime of their life. There were more men unemployed and, correspondingly, more women working. This may have reflected the added stress on women who became the main breadwinners when their partners lost their jobs. While 14.5% of the employed group were either fisherperson or fishplant worker, 54.3% of the unemployed counterpart was of this same occupation. Thus the fishery closure has been a strong factor in causing high unemployment in the studied area. The data in this same table also clearly show that the unemployed had less education and lower income.

Stress

Almost 59% of the unemployed subgroup said that life at the time of the inter-

view was more stressful than before the cod moratorium. More unemployed people cited that their main sources of stress/worry were unemployment and, not surprisingly, their financial situations (Table III). Consequently, the unemployed felt more stress and were much more uncertain about their own future (Table IV).

Despite income from the TAGS program, the majority of the unemployed (71%) considered that they and their family were financially worse off than they were before the fishery closure. Almost 35% of the employed had the same perception, indicating that the ripple effect of job loss affected not only the unemployed but others in the same community due to decreased spending. When specifically asked about the effects of the fishery closure on various aspects of life, by using a rating scale of 1 as "not affected at all" to 7 as affected "a great deal", there was a significant difference in the mean ratings by both groups. The unemployed felt that the fishery crisis had decreased their income a great deal ($p=0.000$). It had strengthened their relationships with their family ($p=0.000$), but at the same time, it caused tension within the family ($p=0.01$). Furthermore, more unemployed perceived that the cod moratorium had adversely affected their health as compared to the employed counterpart ($p=0.000$).

TABLE III
Stress Level Compared With Three Years Ago (before the fishery closure)
and Perceived Sources of Stress

	Employed (n=152) %	Unemployed (n=291) %	p Level
Compared with 3 years ago, life is:			
More stressful	30.9	35.7	
Much more stressful	17.8	23.0	
TOTAL	48.7%	58.7%	0.05
Perceived sources of stress:			
Unemployment	7.8	42.9	0.0001
Finance/money	25.6	32.6	0.0001

TABLE IV
Sources of Stress (Mean Rating)

Source of stress	Employed (n=152)	Unemployed (n=291)	p
Employment status	3.6	5.1	0.0000
Finance	3.6	4.9	0.0000
Cod moratorium	3.8	5.1	0.0000
Uncertainty about own future	4.5	5.8	0.0000
Rating Scale:	1 = not at all stressful 7 = very stressful		

TABLE V
Level of Satisfaction (Mean Rating)

Satisfaction with ...	Employed (N=152)	Unemployed (N=291)	p
Life	5.7	4.8	0.0000
Family Life	6.4	6.2	0.01
Education	5.2	4.7	0.001
Finance	4.7	3.7	0.0000
Employment status	5.4	2.6	0.0000
Way time spent	5.4	4.8	0.0001
Self	5.9	5.7	0.03
Rating Scale:	1 = very dissatisfied 7 = very satisfied		

TABLE VI
General Health Questionnaire (GHQ-28)
(Measuring Diagnosable Psychiatric Disorders)

GHQ-28	Employed (n=152) $\bar{x}$ (sd)	Unemployed (n=291) $\bar{x}$ (sd)	p
Overall	15.61 (10.3)	15.67 (9.2)	NS
Sub-scales			
Somatic symptoms	3.59 (3.07)	3.31 (3.37)	NS
Anxiety/insomnia	3.86 (3.95)	3.58 (4.36)	NS
Social dysfunction	6.88 (1.44)	7.26 (1.94)	0.1
Depression	1.16 (2.68)	1.49 (2.9)	NS

In addition, the unemployed were less satisfied with themselves, with their life, their education, their family life and the way they spent their time (Table V). Boredom and idleness were mentioned by the majority of participants in this study.

Health

When both groups were asked to rate their perceived health in the previous 12

months, using a Likert scale of 1 as "very unhealthy" and 7 as "very healthy", their mean rating of physical health did not show significant difference, but that of mental health indicated that the unemployed were more distressed ($p=0.001$). When mental health was further assessed using the GHQ-28, the overall mean scores of both subgroups did not show significant difference. However, further

analysis of the four components of the GHQ revealed a significant difference in the area of social dysfunction (Table VI), meaning that the unemployed were less able to keep themselves busy and occupied, were less satisfied with the way they have carried out their tasks, less capable with making decisions and less able to enjoy their normal day-to-day activities.

DISCUSSION

The findings of this study support that of previous research which found that involuntary unemployment was one of the most stressful events that a person can face.⁹ The unemployed in this study are less satisfied with their own life, with their family life, and with themselves, indicating disturbance in self-esteem, unhappiness in family which may have detrimental effects on family members, especially the spouse/partner and children. This negative impact on the family was noted in previous studies which associated unemployment with increased incidences of physical illnesses, alcoholism, accidents, suicide, homicide, child abuse, family violence and other social ills.¹⁰⁻¹⁴

In addition to the effects on the entire family, the job loss also has negative impacts on the well-being of others in the community. With less income, spending is reduced resulting in a worse financial status indicated by almost 35% of the working group. This ripple effect also explains the finding that almost an equal percentage of both working and unemployed groups found life stressful at the time of interview and that the overall scores of the General Health Questionnaire reported by both groups are similar. However, the reason for stress in both groups may be different. For the unemployed, stress may arise from boredom, anxiety, uncertainty, and self-depreciation. For the working group, stress may be created by the effort of trying to stay employed. For the working women, the stress may be even higher as they are working a "double shift": keeping a full-time job and maintaining a household.

The perceived poorer mental health in the jobless group and the significant difference in the social dysfunction scores between the two groups indicate psycholog-

ical distress among the unemployed. Although the results of this study do not indicate cause and effect relationship, they lend strong support for that cited in the recent report on the health of Canadians,² which states "The rich are healthier than the middle class, who are in turn healthier than the poor. The well educated are healthier than the less educated and the employed are healthier than the unemployed." (p.iii) It further elaborates that "Income, education, and employment are all indicators of living and working conditions. These factors affect health by themselves, but also interact with each other. The combined factors of chronic unemployment, inadequate education, inadequate nutrition and poor housing all contribute to the generally poorer level of health experienced by ... both working and unemployed poor throughout Canada." (p. iii) Since employment and income are the pillars of health, it follows that, in order to promote people's health, the most important measure that government/policy makers can take is to adopt economic policies conducive to sustained growth.¹⁵ Health and development, thus, go hand in hand. Poor economy affects health and health, in turn, influences development. As health is

considered a resource affecting sustainable development, poor health, physical or mental, is hardly conducive to development. With this in mind, when unemployment is created, whether due to the fishery crisis or to the severe financial cutback, do the policy makers realize that the impact of job loss on health may necessitate more spending in the long run than saving as intended? If cutbacks have to be made, is there the possibility that it can be done gently, slowly, with plenty of psychological support/services provided, such as workshops on stress management, financial management, psycho-social education programs and advocacy groups, to minimize the negative impact as much as possible?

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Did you know?

- From contact with body secretions, healthcare workers' hands can carry bacteria, viruses and fungi that may be potentially infectious to themselves and others.
- One British study determined that even non-nursing providers (such as physical therapists) with the best handwashing habits washed their hands only 56% of the time before patient contact and 75% afterwards.
- By 1994, the Centres for Disease Control and Prevention indicated that 14% (compared to 0% in 1989) of reported nosocomial Enterococci infections were resistant to vancomycin. Today, some strains are resistant to nearly every known antimicrobial agent and are therefore untreatable.

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