APPENDIX 4

DISCOURAGED WORKERS' HEALTH & WELL-BEING DRAFT

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Abstract

The association between unemployment and adverse physical and mental health outcomes makes sense logically and has been reinforced with extensive research. In general it has been found that unemployment is linked to higher instances of various illnesses and poor health, earlier deaths, and higher rates of suicide and other emotional and behavioral problems when compared to people who are not unemployed. The evidence is strong and the findings are sound. However, it has to be understood that there are different types of unemployment and some unemployed people may face their situation differently. Further work is required if the true effects of job scarcity are to be understood. This paper, using data collected as part of community studies in King's County and Glace Bay Nova Scotia, examines a key group requiring attention the discouraged unemployed. They are workers that have given up looking for work. It is argued that the discouraged attitude will reinforce and may even exacerbate the already adverse effects of being unemployed. The target group – discouraged workers – is not easy to distinguish since it essentially combines an individuals 'real', labor force status with their mental attitude toward that status. The latter is difficult to distinguish conclusively. However, a workable classification of labour force attachment was developed, consisting of (1) In the Labor Force (2) Not in the Labor Force, (3) Discouraged Workers (4) Other.

This paper the relationship between labor force status and health. Specifically, self perceived health, and health suggested or implied from responses (to questions dealing with smoking, exercise and pain or discomfort). Among other results it was found that significant differences appeared, with both the Not in the Labor Force and the Discouraged Workers showing pooer health than did persons in the Labor Force. These higher values suggest worse health. Discouraged workers were significantly higher than Not in the Labor Force for Health Suggested or Implied.

Both the Unemployed, and the Discouraged showed significantly higher results than the employed – as expected. However, the Discouraged also showed results that were significantly higher than Unemployed. This supports the idea that not only does the relationship between unemployment and poor health exist, but also that this relationship is even stronger (worse) for Discouraged unemployed.

This table shows an impressively strong relationship between being discouraged and significantly worse mental health. No significant differences appeared between In the Labor Force and Not in the Labor Force. However, significantly higher results appeared between Discouraged and In the Labor Force for every single one of the questions above except those noted with *. That is significantly higher results for six of the eight questions. Furthermore, Discouraged workers registered a significantly higher stress level than Not in the Labor Force did for all of the above except those noted with ^. Again, that was six out of eight showing significantly higher results. In conclusion the study found that being a discouraged worker did in some situations have a more deleterious affect than did simply being unemployed. In no case was it found that unemployed persons were worse off relative to discouraged workers. Since the study providing the data for this study was not specifically focused on the question we addressed one cannot safely draw and strong conclusions. However, the research suggests that greater attention needs to paid to the special case of discouraged workers with respect to impacts on physical and mental health.

Introduction

The association between unemployment and adverse physical and mental health outcomes makes sense logically and has been documented by extensive research. In general, literature shows that unemployment is linked to higher instances of various illnesses and poor health, earlier deaths, and higher rates of suicide and other emotional and behavioral problems when compared to people who are not unemployed. The evidence is strong and the findings are sound. However, there are different types of unemployment and different unemployed people face their situation differently. Further work is required if the true effects of job scarcity are to be understood. This paper examines a key group requiring attention the discouraged unemployed. They are workers that have given up looking for work. It is argued that the discouraged attitude will reinforce and may even exacerbate the already adverse effects of being unemployed. Data available in GPI Atlantic community surveys is used to explore the relationship between measures of physical and mental health and the discouraged worker effect.

Discouraged Workers, Unemployment and Health

The literature has described discouraged workers as those who "move in and out of the labour force with the business cycle, looking for jobs when these are available, while giving up job search during recessions" (Benati, 2001). Benati has further explored the discouraged worker effect, providing empirical evidence that the phenomenon does exist in the United States (Benati, 2001). In addition to cyclical factors behind discouraged workers, a continually unsuccessful job search can also be a cause for workers to become discouraged. Evidence has indicated that "the discouraged worker effect has a significant dynamic component, implying that the psychological impact of unemployment persists over time" (Schweitzer & Smith, 1974).

Discouragement is not limited to the older segments of the population. The relationships between youth who are experiencing long-term unemployment and their prospects for further education have also been studied. It was found that unemployed youth who enter further education programs and are able to stay in them often emphasize social support as a factor in their continued education (Bolam & Sixsmith, 2002). Education has been identified as a key factor in "high-quality re-employment" (Vesalainen & Vuori, 1999).

This raises the issue of social support and its effect on discouraged workers. It has been shown that social support can reduce discouragement after job displacement (Mazerolle and Singh, 2002). The research demonstrated that "displaced workers are less likely to be discouraged if they receive a referral from their employer, if they are encouraged by family members to seek employment, and if they spend time while unemployed in a productive manner" (Mazerolle and Singh, 2002).

While the health effects of being a discouraged worker have not been specifically studied, much relevant research has been conducted on the health effects of unemployment. Studies have found that there is a positive correlation between "unemployment and adverse health outcomes" (Jin, Shaw, & Svoboda, 1995). These adverse health outcomes include such things as increased occurrences of cardiovascular disease, suicide and general illness.

Studies have been done on both the young and old. Among young people, evidence was found that supported a positive relationship between unemployment and psychological and physical illness. There was also some evidence that pointed to an increase in poor lifestyle habits such as increased drug use including cannabis, tobacco and alcohol as a result of unemployment (Morrell, Taylor & Kerr, 1998). Among adults, evidence was found that unemployment was detrimental to people's health and that the unemployed have increased mortality rates and increased cases of physical and mental illness (Mathers & Schofield, 1998).

While the literature supports the existence and relevance of discouraged worker theory and has also examined the health effects of the unemployed, topics surrounding health effects of discouraged workers need to be addressed.

Background

Increasingly there is a realization that development and well-being starts at the community level. However, much of the information needed to address local issues is difficult to obtain and much more does not exist. In the light of this realization, concerned individuals in Kings County and Glace Bay Nova Scotia, with financial support from the Canadian Population Health Initiative undertook the specification and collection of data that could inform their communities, policy makers and policy. One of the areas, Glace Bay, has been in a state of decline generated by a decline in the coal and steel production that provided its economic base. In contrast, Kings County has been stable to growing over the same period. The data collected were extensive covering many life domains including various dimensions of health and of the allocation of time. In Glace Bay workers face a difficult labour market. With traditional jobs disappearing and new jobs requiring different skill sets, job prospects are not good. While some workers can move in search of jobs many more are destined to remain in the community and accommodate to the new reality that often means a future, or certainly present, when they have few job prospects. Many workers continue to look for alternative jobs while others accommodate by means adopting the attitude that there are no jobs for them and dropping out of the labour force. The co-existance of these two groups in reasonable numbers facilitates an examination of the implications of each adaptation modality.

The Kings County and Glace Bay Community research program involved collaboration among a wide variety of partners. The development of a questionnaire to gather data to be used for developing an index of well-being in Glace Bay and Kings County began in 1999. With input from community organizations, including community and regional health board representatives, a questionnaire was developed to collect baseline data on several variables related to health, caregiving, labour force participation, peace and security, voluntary/civic work, impact on the environment, and other elements of well-being including two day time-diary. Data from these surveys provide the base for this study.

The Communities

Kings County lies along the north shore of Nova Scotia in the Annapolis Valley. It is home to approximately 61,794 people, with a gender split of 49.3% males and 50.7% females. Kings County's economy is primarily structured around the resource industry, in particular agriculture, which accounts for 10% of basic employment in Kings County. However, jobs related to the service industries are becoming more prevalent with 48% of the labour force employed in either finance, insurance, real estate, public administration or other service jobs. Today, the unemployment rate in Kings County is 9.1%, putting it below the provincial average. The economy in Kings County, as measured by total average income falls slightly below the provincial average, at $24,140. Transfer payments account for 15% of total average income. Persons with employment incomes earn on average $16,540 annually with males making almost double their female counterparts - $22,010 compared to $11,300.

Glace Bay is at the heart of industrial Cape Breton (Kiceniuk *et al*., 2003). Figures for the community of Glace Bay are not available therefore, the following statistics represent the Electoral District of Glace Bay. According to the 2001 census, Glace Bay is home to 17,710 people, 52.4% of which are female. These figures show a decline in population by 2220 people or 11% from 1991. Of the 6,610 persons in the labour force in 1996 in Glace Bay, 12% were employed in the resource industry, and a growing number, as much as 46% were employed in the service industry. Only 6% were employed in the manufacturing industry and 7% in the construction industry. Today, the unemployment rate in Glace Bay is 19.4%, putting it far above the provincial average of 9.7%. Total average income in Glace Bay falls below the provincial average by $5,630, at $20,340, 31.7% of which comes in the form of transfer payments. The high unemployment levels can inevitably be expected to generate an additional significant number of discouraged workers.

Discouraged Workers

Though the target group – discouraged workers – may be easy to define, they are harder to distinguish. This is because it essentially combines their 'real', very obvious labor force status with their mental attitude towards that status. The latter is difficult to distinguish conclusively. However, with the respondents in Glace Bay and Kings County this was attempted. Ultimately, it was desired that respondents be categorized in terms of their labor force status, but with a separate category for discouraged unemployed. As a result, respondents were categorized in the variable LabForce into one of the following:

Table 1. Labour Force Classification* of Community Populations (LabForce)

	Glace Bay		Kings		Total	
	N	%	N	%	N	%
1 In the Labor Force	776	62.0	1049	74.3	1825	68.5
2 Not in the Labor Force	398	31.8	316	22.4	714	26.8
3 Discouraged	78	6.2	46	3.3	124	4.74

*Derivation of the classification is given in Appendix I.

Table 1 shows that 6.2 percent of respondents of labour force age in Glace Bayfell into the discouraged worker category as measured here. That is nearly twice the Kings County rate. Once this was done, another variable "LabFstat" was created. This variable was created by taking the "In the Labor Force" category from LabForce and looked at which of those respondents said they were employed and which said they were unemployed for their main activity ("activity") (See Appendix I.). These formed two new categories, and the "Discouraged" from LabForce made a third category to complete the variable "LabfStat". The sum of "Employed" and "Unemployed" in "LabfStat" does not equal the "In the Labor Force" total of LabForce. This is because for LabForce, "In the Labor Force" included any respondent who was actively engaged in any labor force activity. This would include a student or homemaker for example who worked only part-time or had some other small involvement in the labor force. For "LabfStat" the focus was to really distinguish those that were truly "Employed" and those that were truly "Unemployed" and compare those with the "Discouraged".

Table 2. Labour Force Classification* of Community Populations (LabfStat)

		Survey Location					
		Glace Bay		King's County		Total	
		Count	Column %	Count	Column %	Count	Column %
LabfStat	Employed	517	70.5%	822	90.5%	1339	82.6%
	Unemployed	138	18.8%	41	4.5%	179	11.0%
	Discouraged	78	10.7%	46	5.1%	124	7.6%
		733	100.0%	909	100.0%	1622	100.0%

Physical Health

Health effects of unemployment have been documented, as noted above. Noted effects include both physical and mental illness. The community surveys offered an opportunity to relate labour force status to both self-perceived health status (HealthSp), which has been found to be a good proxy for more objective measures, and implied health status (HealthSu) derived from responses on health status in the survey. Various survey questions were recoded to ensure that ordinal properties were consistent with lower values representing more favorable outcomes and higher values less favourable.

Self Perceived Health (HealthSp): This variable, as noted, is widely accepted as a proxy for actual health status. The variable H16 ("Would you say your health is…") was recoded as follows: (0)Excellent, (1) Very Good, (2) Good, (3) Fair, (4) Poor.

Health Suggested or Implied (HealthSu): Suggested of implied health was derived from a combination of variables. The variables H32, H37, and H42 - that dealt with smoking, physical exercise, and pain or discomfort respectively – were recoded into RH32, RH37, and RH42. These new recoded variables were valued so that each response that suggested or implied poor health was valued at 1, and the response that suggested better health was 0. HealthSu was

formed as a sum of the values of RH32, RH37, and RH42 that ranged from 0 – more healthy, to 3 – less healthy.

Chronic Conditions (ChronCon): Variables H601 to H622 dealing with chonic conditions and whether or not the respondent suffered from them, were recoded into RH601 to RH622. These new recoded variables were valued so that if a respondent answered that "Yes" they suffered from a specific chronic condition this took a value of 1. "No" had a value of 0. ChronCon was formed as a sum of the values of RH601 to RH6022 that ranged (potentially) from 0 – no chronic conditions, to 22 – suffers from ALL the chronic conditions asked.

Use of Medication (Medicat): The variables H53a to H53u – that dealt with various medication or drugs and whether or not the respondent used them – were recoded into RH53a to RH53u. These new recoded variables were valued so that if a respondent answered that "Yes" they used a specific medication or drug this took a value of 1. "No" had a value of 0. Medicat was formed as a sum of the values of RH53a to RH53u that ranged (potentially) from 0 – uses no medication/drugs, to 21 – uses ALL the medication/drugs asked.

Mental Health

Similarly, mental health related variables were identified and operationalized. There orgin and derivation is presented below.

Time Stress (Stressct) :   Ten variables H20a to H20j dealing with respondent time stress requiring "Yes/No" answers, coded 1 and 0 respectively, where each "Yes" implied greater stress were used to form Stressct. "Stressct" was formed by summing the H20a to H20j questions answered with a "Yes". As a result, "Stressct" provided a measure of implied respondent stress ranging from 0 – least time stressed, to 10 – most time stressed. Reliability analysis of the items indicated very high reliability with an alpha of .8290.

Emotional State (EmotStat): This was based on the variables H47a to H47f which all posed "Yes/No" questions with regard to the respondents emotional state "during the past month" in which "Yes" responses implied a poor emotional state. High values indicate a poor emotional state of the respondent(s). Again, the index proves to be highly reliable with an alpha of .8459.

Sustained Depression (SusDepr): Question H48 which asked "During the past 12 months, was there ever a time when you felt sad, blue, or depressed for 2 weeks or more in a row?" was recoded into RH48 so that "Yes" = 1 and "No" = 0 where the higher value implies the poor emotional state.

Life Stress (LifeStre): Question H50 "Would you describe your life as..." was
was recoded into RH50 as follows: (1) Not at all stressful, (2) Not very stressful, (3) Somewhat stressful and (4) Very stressful. Again the higher value implies greater stress.
Life Satisfaction (LifeSatf): Question H51 which asked "With your life in general, would you say you are…" recoded into the variable RH51 with the following values (1) Very satisfied, (2) Somewhat satisfied, (3) Somewhat dissatisfied, (4) Very dissatisfied.

Repeated Depression (RepDep) H4 which asked "How many times in the past 12 months did you feel sad, blue, or depressed was used as reported.

Support Group (Alone):Variables H67, H68, and H69 – that all dealt with whether or not the respondent had people around them for various forms of support – were recoded into RH67, RH68, and RH69. If the respondent answered "Yes" so these questions it suggested they had this support. "No" meant they did not. For the recoded variables, "Yes" = 0 and "No" = 1. The variable Alone was formed as a sum of the values of RH67, RH68, and RH69 that ranged from 0 – not at all alone, to 3 – totally alone.

The outcome variables were examined against the respondent's labor force status. (See Appendix II.) The results for the respondents in each of the labor force categories (In the Labor Force, Not in the Labor Force, Discouraged, and Other) were compared for significant differences. Special attention was paid to the results shown for discouraged workers.

Findings

The first relationship examined was that between labor market status and physical health. Specifically, self perceived health, and health suggested or implied from responses (to questions dealing with smoking, exercise and pain or discomfort).

Table 3. Physical Health Status by Labour Force Status (LabForce)

	Respondent Labor Force Status (LabForce)			
	IN (A)	NOT IN (B)	Discouraged (C)	Total
HealthSp	1.27	1.70 [A]	1.91 [A]	1.4
HealthSU	0.75	0.85 [A]	1.21 [AB]	0.8
N	1825	714	124	2663

[AB] Tests are based on two-sided tests assuming equal variances with sig. level of .05. For each significant pair the key of the smaller Category appears under the category with the larger mean.

Significant differences appeared, with both the Not in the Labor force and the Discouraged showing significantly higher values than In the Labor force, Table 3. These higher values suggest worse health. Discouraged workers were significantly higher than Not in the Labor Force for Health Suggested or Implied. There was no significant difference between Not in the Labor Force and Discouraged in terms of Self Perceived Health Status (HealthSp). Subsequent tests revealed no significant differences between sexes emerged, and Glace Bay was higher than Kings County only in the case of Health Suggested or Implied. These results indicate a relationship exists between both those not in the labor Force and those discouraged and resulting poor(er) health. This is interesting considering it has long been concluded that a relationship exists between unemployment and poor health. However, the unemployed are In the Labor Force, but In the Labor Force still showed better (more "healthy") results than both Not in the

Labor Force and Discouraged. To examine this further, just the employed, unemployed, and discouraged were examined using "LabFstat" in relation to the same health variables:
Both the Unemployed, and the Discouraged had significantly higher averages for both HealthSp amd for HealthSsu than the employed – as expected, Table 4. However, the Discouraged were also significantly higher than the Unemployed. This supports the contention that not only does the relationship between unemployment and poor health exist, but also that this relationship is exacerbated by being Discouraged.

Table 4. Physical Health Status by Labour Force Status (LabfStat)

	Employed (A)	Unemployed (B)	Discouraged (C)	Total
HealthSp	1.27	1.49 [A]	1.93 [AB]	1.4
HealthSU	0.75	0.98 [A]	1. 21 [AB]	0.8
N	1339	179	124	1665

[AB] Tests are based on two-sided tests assuming equal variances with sig. level of .05. For each significant pair the key of the smaller Category appears under the category with the larger mean.

When the presence of chronic conditions (variable "ChronCon) and use of medication or drugs (variable "medicat") were examined, Not in the Labor Force yielded significantly higher averages than did either In the Labor Force and Discouraged. This most likely can be explained by the fact that many persons that were not in the labour force may be out of it because they have a chronic condition in which case they would probably require medication.

Having explored physical health, it is necessary to explore the relationship between labor force status and mental health or well-being. Examination of this subject yielded the following results:

Table 5 shows an impressively strong relationship between being discouraged and significantly poorer mental health. No significant differences appeared between In the Labor Force and Not in the Labor Force. However, significantly higher results appeared between Discouraged and In the Labor Force for every single one of the questions in Table 5 except those noted with *. That is significantly higher results for six of the eight questions. Furthermore, Discouraged was significantly higher than Not in the Labor Force for all of the above except those noted with ^. Again, that was six out of eight showing significantly higher results. Location and Sex had some affects on the results. Females registered significantly more stress for both Stressct and for Lifestre.

Interestingly, no significant differences appeared between Discouraged and Unemployed, when this relationship was examined again using variable LabFstat. This would suggest that both have similar affects on mental health.

Since group support can be expected to alleviate some of the negative effects identikfied. The availability of such support was examined using the variable "Alone.". The difference that appeared between those In the Labor Force and those Not in the Labor Force was not significant, Table 6. However, the Discouraged respondents showed significantly higher averages than both

In the Labor Force and Not in the Labor Force. This suggests that discouraged unemployed respondents are either more alone or at least perceive themselves as being so. Both of which will be detrimental to mental and emotional well-being. Sex had no significant effect on the results. When "Alone" was examined with the LabFstat variable, both Unemployed and Discouraged were significantly higher than Employed, but there was no significant difference between them. This reinforces the earlier result that suggested that being unemployed, or being discouraged unemployed have similar (detrimental) effects on mental health, and that both are worse for your mental well-being than being employed is.

Table 5. Mental Health Status by Labour Force Status (LabForce)

	Respondent Labor Force Status			
During the past month how often did you feel	IN	NOT IN	Discouraged	Total
So sad that nothing could cheer you up?	0.5	0.5	0.8 [AB]	0.5
Nervous? *	0.8	0.8	1.0 [B]	0.8
Restless or fidgety?	1.0	0.9	1.2 [AB]	1.0
Hopeless?	0.3	0.3	0.5 [AB]	0.3
Worthless? * ^	0.3	0.3	0.4	0.3
that everything was an effort?	0.7	0.7	1.0 [AB]	0.7
During the past 12 months, was there ever a time when you felt sad, blue, or depressed for 2 weeks or more in a row? ^	0.1	0.2	0.2 [A]	0.2
With your life in general, would you say you are...	1.7	1.7	2.0 [AB]	1.7
N	1825	714	124	2663

[AB] Tests are based on two-sided tests assuming equal variances with sig. level of .05. For each significant pair the key of the smaller Category appears under the category with the larger mean.

Table 6. Presence of a Support Group and Labour Force Status (LabForce)

	Respondent Labor Force Status			
	IN	NOT IN	Discouraged	Total
Presence of Support Group	0.2	0.1	0.4 [AB]	0.2
N	1825	714	124	2663

[AB] Tests are based on two-sided tests assuming equal variances with sig. level of .05. For each significant pair the key of the smaller Category appears under the category with the larger mean.

Related to mental health and emotional state is the presence of stress. One of the key determinants of stress is time use. More specifically, not having enough time – or suffering from "time poverty" – raises stress. The variables "StressCt" and "RH50" were used to examine relationships between labor force status and stress:

Table 7. Stress and Labour Force Status (LabForce)

	Respondent Labor Force Status			
	IN	NOT IN	Discouraged	Total
Count of Time Stress Variables (Stressct)	2.9 [B]	2.2	2.7 [B]	2.7
Would you describe your life as... (LifeStre)	2.6 [B]	2.3	2.5 [B]	2.5
N	1825	714	124	2663

[AB] Tests are based on two-sided tests assuming equal variances with sig. level of .05. For each significant pair the key of the smaller Category appears under the category with the larger mean.

As expected, respondents that were In the Labor Force and those that were Discouraged showed significantly higher stress results than respondents that were Not in the Labor Force, Table 7. Females showed significantly higher stress levels than males for both of the above, and King's County respondents described their lives (Lifestre) as significantly more stressful than did respondents from Glace Bay – though they did not show any significant different in their Count of Time Stress (StressCt).. When the variable "LabFstat" was used against these same stress variables, there were no significant differences between the stress levels of the employed, unemployed or unemployed discouraged respondents. This suggests that they all suffer similar levels of stress, though it is likely that they are different forms of stress as they are clearly different scenarios of labor force status. The employed suffer from stress as they try to manage all the demands on their time. At the other extreme, with no prospect of finding a job, discouraged workers have immediate needs for money to meet, at least, maintenance payments.

Conclusions

This paper set out to examine the impact of a discouraged worker effect on the physical and mental well-being of individuals. It was hypothesized that the state of being a discouraged worker would exacerbate tendancies, noted in the literature, for unemployment to generate negative physical and mental health outcomes. Measures of unemployment and discouraged workers were found to be difficult when one attempts to capture the reality of the labour market rather live with the neatness of official measures of unemployment. Seldom does an individual fit only one category as they move into and out of school, the workforce, family care, volunteer work. Labour force classifications developed were used to explore the relationships among themselves and physical and mental health outcome variables.

Significant negative impacts were found for self-perceived health, suggested or implied health, and emotional state. Additionally, it was identified that contrary to e need for group support, lack of such support further exacerbated the noted problems.

While results were mixed, the findings support the argument that unemployment and the discouraged worker effect both appear to be associated with negative physical and mental health outcomes. The findings here suggest that a profitable line of inquiry is the effective strength and extent of of the negative effects of the discouraged worker syndrome and the availability resources to mediate any negative effects.

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Appendix I

There was no single question in the community surveys that accurately succeeded in establishing the category discouraged workers so it was necessary to define such workers using the evidence at hand. First, three new variables were created. These were: LastWk, EmpDisco, and EmpLook. LastWk – A combination of the respondent's **Main Activity** ("activity") and what they said their employment status was **last week** ("emp1").EmpDisco – A combination of the respondent's **Main Activity** ("activity") and whether or not they were **looking for work** ("emp6"); EmpLook - Similar to the above, however it is a combination of what the respondent said was their employment status **last week** ("emp1") and whether or not they were **looking for work** ("emp6")

To understand these three created variables, one must first know the initial variables (noted in parenthesis) that formed them.

activity – "Your main activity"
 1 Employed
 2 Unemployed
 3 Student
 4 Homemaker
 5 Retired
 0 Other

emp1 – "During last week, were you employed?"
 1 Employed
 2 Unemployed
 3 Not in Labor Force

emp6 – "Type of work looking for if unemployed"
 0 Not looking for work
 1 Full-time work
 2 Part-time work
 3 Either

Once created, the new variables took the following values, and the values had the following implications (noted in bold italics after each variable's value labels) in terms of respondent labor force status (LabForce):

LastWk
1. Employed and Employed Last week
2. Employed but Unemployed Last week
3. Employed but Not in Labor Force Last week
4. Unemployed but Employed Last week
5. Unemployed and Unemployed Last week
6. *Unemployed and Not in Labor Force Last week*
7. Student but Employed Last week
8. Student but Unemployed Last week
9. Student and Not in Labor Force Last week
10. Homemaker but Employed Last week
11. Homemaker but Unemployed Last week

12. Homemaker and Not in Labor Force Last week
13. Retired but Employed Last week
14. Retired but Unemployed Last week
15. Retired and Not in Labor Force Last week
16. Other but Employed Last week
17. Other but Unemployed Last week
18. Other but Not in Labor Force Last week

1-5, 7 & 10 are "In the Labor Force"; 6 is "Discouraged"; 8, 9, 11 & 12 are "Not in the Labor Force; 13-18 are "Other"

EmpDisco –
1. Employed and NOT looking for work
2. Employed and looking for work
3. *Unemployed Worker DISCOURAGED*
4. Unemployed Worker NOT Discouraged
5. Student NOT looking for work
6. Student Looking for work
7. Homemaker NOT looking for work
8. Homemaker Looking for work
9. Retired NOT looking for work
10. Retired but looking for work
11. Other NOT looking for work
12. Other Looking for work

1, 2, 4 & 6 are "In the Labor Force"; 3 is "Discouraged"; 5 & 7 are "Not in the Labor Force"; 8-12 are "Other"

EmpLook
1. Employed Last week but Looking for work
2. Unemployed Last week but Looking for work
3. Not in the Labor Force Last week but Looking for work
4. Employed Last week and NOT Looking for work
5. *Unemployed Last week and NOT Looking for work*
6. Not in the Labor Force Last week and NOT Looking for work

1-4 will be classified as "In the Labor Force"; 5 is "Discouraged"; 6 is "Not in the Labor Force"

At this point, the respondents had successfully been categorized as intended:
1. In the Labor Force
2. Not in the Labor Force
3. Discouraged
4. Other *

The reason for creating three new variables is clear. None of the previously existing variables could alone enable the categorization of the respondents as originally outlined. The "activity" variable is too narrow – for example a student could be either employed or unemployed; "emp1" says nothing with regards to discouragement; and "emp6" obviously just focuses on those that are unemployed. As a result, these variables were used to create the variables: LastWk, EmpDisco, and EmpLook.

Initially, there was overlap in terms of respondents being in more than one of the three created variables, hence it was necessary to filter them such that ultimately they would fall into one of the above four

categories. For example, this means that though one variable may suggested that a respondent was "Not in the Labor Force", another suggested they were "In the Labor Force". The latter takes precedents over the former because if you are participating in the labor force even a small amount, you are in the labor force. Also, any respondent classified as "Discouraged" must – naturally - NOT be looking for work. * Finally, the category "4. Other" was dropped because no respondents reliably fell in to this category.

Appendix II

	Survey Location	
	Glace Bay	Kings County
During the past month, how often did you feel so sad that nothing could cheer you up?	.50	.45
During the past month, how often did you feel nervous?	.75	.80
During the past month, how often did you feel restless or fidgety?	.86	.91
During the past month, how often did you feel hopeless?	.28	.29
During the past month, how often did you feel worthless?	.21	.27
During the past month, how often did you feel that everything was an effort?	.59	.68
During the past 12 months, was there ever a time when you felt sad, blue, or depressed for 2 weeks or more in a row?	.15	.13
With your life in general, would you say you are...	1.69	1.69

	Sex		
	Male	Female	Total
During the past month, how often did you feel so sad that nothing could cheer you up?	.42	.52	.48
During the past month, how often did you feel nervous?	.72	.82	.77
During the past month, how often did you feel restless or fidgety?	.91	.86	.88
During the past month, how often did you feel hopeless?	.28	.29	.28
During the past month, how often did you feel worthless?	.23	.26	.25
During the past month, how often did you feel that everything was an effort?	.64	.64	.64
During the past 12 months, was there ever a time when you felt sad, blue, or depressed for 2 weeks or more in a row?	.12	.16	.14
With your life in general, would you say you are...	1.72	1.66	1.69