Work-related Experience and Financial Security of Veterans Affairs Canada Clients: Contrasting Medical and Non-medical Discharge

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Abstract

Work-related Experience and Financial Security of Veterans Affairs Canada Clients: Contrasting Medical and Non-medical Discharge

This paper is based on the VAC Canadian Forces Survey, a representative study of clients of Veterans Affairs Canada conducted in 1999, and compares those who report being discharged for medical reasons with those discharged for other reasons. We describe the characteristics associated with medical and non-medical discharge, and then examine post-discharge work experiences and perceived economic security. Those released for medical reasons are on average 6 years younger than those released for other reasons and had spent significantly fewer years in regular service (17.2 vs. 23.5 years) They are significantly less likely than those released for other reasons to be officers (16.4 vs. 31.4%). Upon release from the Canadian Forces, a significantly smaller proportion report having ever worked in civilian jobs (80.7 vs. 91.6%), at the time of the survey they had held more post-release jobs (2.86 vs. 2.73); and they were more likely to be either unemployed (9.3 vs. 7.6%) or inactive (39.0 vs. 37.7%) at time of survey. Those released for medical reasons are significantly less likely to report satisfaction with current or anticipated income and investments (Current: 37.3 vs. 59.4%; Continued: 26.9 vs. 42.3%), which appears to be due primarily to lower levels of current income and diminished health status (specifically current level of pain, depression, and PTSD). This portrayal should inform VAC policy concerning the current and future economic well-being of those who have been in Canada's service, particularly in terms of the consequences of medical disability.

Introduction

In a previous report for Veterans Affairs Canada (VAC), which used the same original data set of Canadian Forces clients of VAC, the authors addressed employment, career, and retirement planning issues. In the report (Marshall, Matteo and Mueller, 2000), we suggested the need to consider more specifically the general patterns of career development both within and outside of the military:

> "Most men who join the Canadian Forces have the opportunity to experience a stable career of considerable duration. For some, this career may be altered or ended by disability. VAC clients are vulnerable, economically, because of the ways in which a stable occupational career may be interrupted or terminated, and in some instances by the nature and severity of their disability. The VAC client group is exceptionally diverse, even when considering (as we do) only male clients, and the bases of diversity all interact to shape the occupational careers and consequent economic security of the clients."

In this paper we provide a more detailed analysis of these issues, comparing VAC clients who had been discharged from the service for medical and for non-medical reasons. Our particular concern is with the extent to which medical discharge, as contrasted with non-medical discharge, might be associated with post-discharge career disruption, with possibly adverse implications for income and perceived economic security. We first describe the different characteristics associated with medical and non-medical discharge, and then examine post-discharge work experiences and financial security.

Data and Methods

Sample

The data used for this analysis are from the Veterans Affairs Canada (VAC) Canadian Forces Survey, a nationally representative postal survey of VAC clients conducted in 1999 as part of a study of veterans' care needs. The sample was restricted to VAC Canadian Forces clients

currently residing in Canada who were aged 65 or less.[1] A total of 1855 valid questionnaires were returned for a response rate of 72%, and 113 questionnaires from the pilot study were added to the data for a total sample of 1968 respondents.[2] All respondents meet the disability standards for eligibility for VAC benefits.

The original data cleaning process led to the deletion of 11 cases (three were over the age of 65, and eight reported "Appointment" status in the military). For this analysis, we chose to exclude female clients (N=112). Women in the Canadian Forces are likely to have different post-military career patterns and retirement planning issues than men. We felt these data could not be pooled, as including them would potentially alter the findings and thus disallow generalizations to VAC male clients, but examining them separately was difficult given the small sample of women. Finally, because our interests concern post-discharge outcomes, we exclude from consideration VAC clients who are still serving in the Canadian Forces (N=279). The working sample for this analysis was limited to respondents who were not missing data on the primary variables of interest. The casewise deletion process led to a loss of 703 cases, yielding a final sample of 863 respondents, all of whom are male, aged 65 or less, and no longer serving in the Canadian Forces.[3] All analyses utilize weighted data to account for the stratification variables employed in the sampling process; the weight variable accounts for province of residence, type of service, and age.[4] The basic demographic characteristics of this sample, as well as variables describing Canadian Forces career experience, are presented in Table 1. This table also shows the characteristics based on the variable of major interest here: whether the client was released for medical reasons. In Table 2, we descriptively present additional data about post-release employment experiences, as well as data on three indicators of satisfaction with economic situation.

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[1] The survey and preliminary analysis was conducted by Créatec+, a commercial survey research firm. The population base included 18,443 VAC clients, compiled through two data systems: the Benefits Delivery System, and the Pensions Status and Inquiry System.

[2] Of the initial survey questionnaires sent to clients (2760), 6% were in French (480) and the remainder in English (2280). In the attained sample, 15.9% of questionnaires were French language.

[3] The majority of clients were excluded due to non-response on questions concerning income and employment history. For a review of missing data analysis, please see Tables A and B in the Appendix.

[4] Type of service distinguishes Special Duty Area (SDA), Reserve, or Regular Forces. Any client receiving a disability pension for service in an SDA is coded as "SDA" regardless of any additional entitlement pensions. The remaining clients who were not receiving any SDA pensions were categorized as either "Regular" or "Reserve."

Variables and Measurement

With the data available to us, we made many coding decisions, which we describe in the context of the description of variables. It is important to note that we conducted our own extensive data cleaning of the file, resulting in some discrepancies between our own and other internal reports prepared from the survey for Veterans Affairs Canada.

Our **major analytical variable**, medical release status, is dichotomous, based on the question: "Were you released from the Canadian Forces due to medical reasons?"

As **dependent variables**, we use several measures of economic status and its implications for feelings of economic security. Total individual income from the previous year was measured using ordinal categories in $10,000 increments from "10,000 or Less," to "80,000 or More". Perceived economic stability was measured by three questions concerning the ability of current income and investments to satisfy economic needs. Respondents were asked: "Do your current income and investments satisfy your needs?" Responses were dichotomized into categories of: "Yes" (N=453) and "No / Don't Know" (N=379/31). Concern about future economic stability was separated into two questions. The first concerns how well current economic position will accommodate future standard of living: "Do you anticipate your current income and investments will continue to satisfy your needs?" Again, responses were dichotomized into categories of: "Yes" (N=323) and "No / Don't Know" (N=382/158). A third measure asked, "Looking to your future, how well do you think your income and investments will continue to satisfy your needs?" Responses were dichotomized into categories of: "Very Well / Adequately" (N=53/342) versus "Not Very Well / Totally Inadequately / Don't Know" (N=276/63/129). Note that, for each measure of perceived economic stability, we chose to include a response of "Don't Know" with the negative replies because we infer this implies a lack of confidence about financial security.

Independent variables are grouped into a series of blocks: general characteristics, health status, military career, current employment status, and work stability indicators. These blocks form the foundation for the causal analysis. In the first block, general characteristics of interest include respondent age (range 20 - 65), and level of current education, coded as: "Secondary

Diploma Not Completed," "Completed Secondary Diploma," "Some or Completed Post-Secondary Diploma," and "Completed Bachelor's or Post-Graduate Diploma."

Health status measures, the second block, include the global health indicator: "Compared to other people your age, would you say that in general your health is: excellent, good, fair, or poor?" The response categories were collapsed to create a dichotomous indicator: "Excellent / Good" or "Fair / Poor." The second health measure is a scale of current level of pain or discomfort, which was created from two survey questions: (1) "In general, do you have any trouble with pain or discomfort?" and (2) "How would you describe your usual intensity of pain or discomfort?" Respondents who reported no pain or discomfort in the first question were coded as "None;" Those who indicated that they did experience pain or discomfort in the first question were coded as their response to the second question: "Mild," "Moderate," or "Severe." We collapsed the categories of "None" and "Mild" because we assume that both responses indicate minimal levels of disability.[5] This variable thus has three categories in our analyses. Medical release status, which can be considered an indicator of current health status, is not included in this block. Instead, we use this variable as a separate control because our policy interests led us to compare different models depending on whether the respondent was released for medical reasons.

Two diagnostic health variables are included in this analysis: post-traumatic stress disorder (PTSD) and depression. Respondents completed the PCL-M, a 17-item self-report rating scale for assessing the potential of PTSD.[6] Consistent with Weathers and colleagues (1993), we classified respondents as symptomatic dependent upon DSM criteria (Method B) rather than cut-off scores. Therefore, respondents who reported "quite a bit" or "extreme" symptom experience on at least one Criteria B item (re-experiencing), three Criteria C items (avoidance/numbing), and two Criteria D items (hyperarousal) are considered cases of probable PTSD. Clients who meet the requisite for any two of these above criteria are classified as cases of subthreshold PTSD. All other respondents are deemed as not having PTSD. In order to maximize response, we

[5] The survey included standard measures of ADL and IADL. Crosstabs reveal that 81% of respondents who experience "Mild" levels of pain or discomfort do not experience limited activity – 28.6% report "no" limited activity whatsoever, and 52.4% report that only "a few" activities are limited by pain or discomfort. Regression analyses not included here which included IDL and IADL measures did not increase our explanatory power.

[6] For a detailed discussion of the PCL-M and the CES-D as they relate specifically to this sample, please see G. J. G.

imputed data for all clients who were missing one or two items on the PCL-M scale (N=237; 12% of original dataset). Respondents were given the average value for their responses on the given criteria for which data were missing.

A similar imputing strategy was used for depression, which was measured by the CES-D 20-item scale. Consistent with Radloff (1977), clients with a total score of 16 or higher (range 0-60) are classified as potential cases of depression. We imputed data for all clients who were missing one or two items on the scale (N=171; 9% of original dataset). Respondents were given the average value of their responses on the scale.

In previous analyses on these data, it was found that a disproportionate percentage of VAC clients express symptoms consistent with a diagnosis of either major depression or PTSD. Furthermore, there is a high prevalence of comorbidity with these conditions. The relationships between general health status and both PTSD and depression are shown in Table 3 below, in the analysis section. The relationship between depression and PTSD is considered in Table 4 of the analyses. Due to the high comorbidity of these conditions, collinearity diagnostics were performed within all regression analyses. In all cases, VIF values and eigenvalues are within acceptable ranges to indicate that multicollinearity is not a factor influencing coefficient estimates. (Data available upon request.)

The third block of indicators concerns the military career. Indicators of military career include element of service (land only, sea only, air only, or multiple elements), age on date of release (range 17-63), number of overseas deployments (range 0-5), and rank on date of release coded as: “Non-Commissioned Officer or Below,” “Junior or Subordinate Officer,” or “General, Flag, or Senior Officer.”

The fourth block is a single indicator of current employment status. A measure of current employment status was created from a crosstabulation of two questions from the survey. Respondents were asked to indicate if they were “currently working for pay” or if they were “actively looking for a job.” Respondents currently working for pay were coded as “In the Civilian Labour Force.” Respondents actively looking for a job were coded as “Unemployed.” Finally, a respondent neither currently employed nor unemployed was coded as “Inactive.” There

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Asmundson (2000) “VAC Canadian Forces Survey Analysis.”

are potential limits to this measure due to uncertainty about whether "actively looking for a job" means unemployment or dissatisfaction with a current occupation, but we suspect this is not a serious misrepresentation of the data.

The final block measures work stability. Respondents were asked if they have ever worked for pay, and if so, the "number of different jobs or positions ... since you left the Canadian Forces" (range 0-20). In addition, we included indicators of unemployment since discharge from the Canadian Forces: "At any time since leaving the Canadian Forces, were you out of work and looking for a job in the paid labour force?" Respondents were also asked about the number of periods of unemployment experienced since discharge (range 0-11).

Analysis

The goal of this analysis is to uncover the descriptive pathways that characterize the major decisions and events once a Canadian Forces member becomes disabled. We begin with a descriptive generalization of the trajectories that are experienced by this sample of VAC clients in terms of military career at time of release, post-military civilian employment, and actual and perceived economic stability. Next, to focus on how the above patterns are affected by medical release status, we generate a series of crosstabs and means tests. The final aspect of this analysis focuses on the causal pathways for actual economic status and perceived economic stability. In the causal analyses, blocks are entered according to hypothesized effects on the relationship between medical release status and the outcome variable. For instance, general characteristics, such as measures of human capital, are known to have profound predictive ability on employment and economic outcomes, so they are included first to determine if medical release status maintains a significant relationship with the dependent variables. We then consider health to highlight the complexity and variability of VAC clients in terms of disability. Military career variables chronologically precede employment status and work stability, since civilian labour force experience is only measured after release from the Canadian Forces. Due to collinearity, measures of current employment status and work stability are considered separately in the models.

We perform a series of ordinary least squares regressions (current income) and binomial logistic regressions (perceived economic stability outcomes) to determine significant causal relationships. As mentioned previously, for the analysis of perceived economic security, independent variables are entered in a series of blocks (nested models) to allow for comparison of models: medical release status, general characteristics, health status, military career, and either current employment status or work stability indicators.

Stability of the Military Career

Military service provides for its members considerable occupational stability and a framework of guided, mentored career progression. Senior ranks are explicitly charged with the responsibility to assist in the professional development of those whom they command. Those of all ranks therefore receive ongoing evaluation and mentoring for promotion and advancement in the course of their careers. Dowd (2001) has persuasively made this case in his study of US Army generals, but it may be generalized to all ranks and to the Canadian Forces (CF). As Dowd notes,

> "The military, more than almost all other employers, structures into the careers of its soldiers (officers and enlisted men and women) continual opportunities for the acquisition of human capital. Although it is rarely credited for doing so, the military profession develops and nurtures in its members a set of characteristics that are not only advantageous for mission-related purposes but which are highly conducive to a satisfying and productive retirement. These characteristics include self-confidence, optimism, a feeling of efficacy, and a sense of competence..." (Dowd, 2001: 233-4).

For those who spend their entire career in the military, this is probably so, and it might well also be so for Veterans Affairs Canada clients, save for the factor of the medical condition that warrants discharge for medical reasons, and the fact that medical discharge is not anticipated or planned. The average client of VAC had spent over 20 (21.55 years) years in the Regular Forces and just over five years in the Reserve Forces. Most clients (72%) reported no changes in military occupation codes over their service careers. Thus, the client population of VAC includes

many who had stable careers while in the military.[7] We now consider the conditions of their release from the Canadian Forces.

Release from the Regular Force

At the time of the study, the CF had a mandatory retirement age of 55 (which was raised to 60 in 2002). The vast majority (85%) of VAC clients are not currently serving in the CF, and our study is restricted to them. Their average age at leaving the service was 40.3 years, but ranged widely (from 17 to 63). Higher rank is associated with leaving the service at a later age. Almost half of the 'main reasons' given for leaving the service were some form of compulsion, the most frequently given reason in that category being "compulsory release due to illness or disability" (given by 29% of respondents who listed any 'main reason'). The second most frequently given 'main reason' (12% of those giving any main reason) was "compulsory release due to mandatory retirement policies." Among voluntary reasons given, 6% listed as a main reason their own illness or disability. Only 18% listed job dissatisfaction as a main reason for voluntary release from the service.

[7] We do not consider serving in multiple elements to be a sign of career instability because these elements are all within the unified Canadian Forces. Nor do we consider overseas deployments, experienced at least once by 60.1% of clients (mean deployments, 1.03), to be a sign of career disruption. The impact of deployment on subsequent military career progression is worthy of investigation but deployment does not interrupt the occupational career of someone in the military– it is a fundamental component of normative careers.

Table 1. Characteristics of VAC Client Sample by Medical Release Status (N=863)[a]

	Medical Release (N=269)	Non-Medical Release (N=594)	Total[b] (N=863)
Demographics			
Mean Age	47.99	54.26	52.31 ***
sd	(10.61)	(8.96)	(9.93)
Range	23 - 65	25 - 65	23 - 65
Education (%)			
Secondary Not Complete	20.8	20.0	20.3
Completed Secondary	21.6	24.2	23.4
Some or Completed Post-Secondary	50.6	45.8	47.3
Completed Bachelor or Post-Graduate Degree	7.1	9.9	9.0
Individual Income (%)			**
Less Than $10,000	4.1	3.7	3.8
$10,000 - $19,999	15.9	10.3	12.1
$20,000 - $29,999	31.9	22.1	25.1
$30,000 - $39,999	23.3	25.5	24.8
$40,000 - $49,999	13.0	15.9	14.9
$50,000 - $59,999	5.6	9.1	8.0
$60,000 - $69,999	2.2	4.2	3.6
$70,000 - $79,999	1.5	3.4	2.8
$80,000 or More	2.6	5.9	4.9
Health			
General Health Status (%)			***
Good/Excellent	26.8	59.5	49.3
Fair/Poor	73.2	40.5	50.7
Current Level of Pain (%)			***
Mild/None	16.4	41.9	34.0
Moderate	55.6	44.6	48.0
Severe	28.0	13.5	18.0
Post-Traumatic Stress Disorder (%)			***
None	68.3	84.0	79.1
Subthreshold	11.2	7.7	8.8
Probable	20.5	8.2	12.1
Depression - CES-D (%)			***
No	65.4	82.4	77.1
Yes	34.6	17.6	22.9

	Medical Release (N=269)	Non-Medical Release (N=594)	Total[b] (N=863)
Military Career			
Career Military Type (%)			*
Regular Force Only	26.9	31.8	30.2
SDA	66.4	56.8	59.8
Reserve	6.7	11.4	10.0
Mean Years in Regular Forces[c] *sd*	17.21 (9.12)	23.49 (9.24)	21.61 *** (9.63)
Range	1 - 38	1 - 38	1 - 38
Mean Years in Reserve Forces[c] *sd*	4.61 (4.45)	5.29 (5.72)	5.11 (5.42)
Range	0 - 25	0 - 31	0 - 31
Elements of Service (%)			***
Land Only	57.8	46.1	49.8
Sea Only	9.0	10.4	10.0
Air Only	10.4	21.5	18.1
Multiple Elements	22.8	21.9	22.2
Overseas Deployment (%)			**
Never	33.8	43.2	40.3
At Least Once	66.2	56.8	59.7
Mean # of Overseas Deployments *sd*	1.08 (1.09)	1.01 (1.15)	1.03 (1.14)
Range	0 - 5	0 - 5	0 - 5
Age on Date of Release *sd*	36.05 (9.46)	42.15 (9.54)	40.26 *** (9.92)
Range	17 - 55	19 - 63	17 - 63
Current / Time of Release Rank (%)			***
General/Flag/Senior Officer	6.3	16.2	13.1
Junior/Subordinate Officer	10.1	15.2	13.6
Non-Commissioned Officer or Below	83.6	68.7	73.3

[a] Sample data are weighted and limited to male respondents who are age 65 or less and no longer actively serving in the Canadian Forces.

[b] Level of significance is based upon F-statistic for continuous variables (means) and Pearson chi^2 for categorical variables (crosstabs).

*** p<.001; ** p<.01; * p<.05

[c] *Years in Regular Forces* : N = 232 and 541; *Years in Reserve Forces* : N = 62 and 174 (Medical Release and Non-Medical Release)

Table 2. Post-Release Characteristics of VAC Client Sample by Medical Release Status (N=863)[a]

	Medical Release (N=269)	Non-Medical Release (N=594)	Total[b] (N=863)
Employment Characteristics			
Current Employment Status (%)			
Employed in Civilian Labour Force	51.7	55.1	54.1
Unemployed but Looking for Job	9.3	7.6	8.1
Inactive	39.0	37.7	37.8
Ever Worked for Pay (%)			***
Yes	80.7	91.6	88.2
No	19.3	8.4	11.8
Mean # of Different Jobs	2.86	2.73	2.77
sd	(3.41)	(2.51)	(2.82)
Range	0 - 20	0 - 20	0 - 20
Ever Unemployed			*
Yes	49.4	42.0	44.3
No	50.6	58.0	55.7
Mean # Unemployment Periods	1.64	1.39	1.47
sd	(2.21)	(2.04)	(2.09)
Range	0 - 11	0 - 11	0 - 11
Further Education or Training Completed			
Yes	44.8	42.9	43.5
No	55.2	57.1	56.5
Income / Invesments Satisfaction			
Satisfaction with Current Level			***
Yes	37.3	59.4	52.6
No / Don't Know	62.7	40.6	47.4
Current Level Will Continue to Satisfy Needs			***
Yes	26.9	42.3	37.5
No/Don't Know	73.1	57.7	62.5
Level of Future Satisfaction of Needs			***
Very Well / Adequate	34.2	51.0	45.8
Not Very Well / Totally Inadequately / Don't Know	65.8	49.0	54.2

[a] Sample data are weighted and limited to male respondents who are age 65 or less and no longer actively serving in the Canadian Forces.

[b] Level of significance is based upon F-statistic for continuous variables (means) and Pearson chi^2 for categorical variables (crossta

*** p<.001; ** p<.01; * p<.05

A direct question asked: "Were you released from the Canadian Forces due to medical reasons?" and 31% of our sample of clients replied in the affirmative. Age was significantly associated with reported medical release. Thus, 56% of clients aged 35 or less reported release for medical reasons and the percentage dropped by age category, with just 20% of clients aged 55 or more citing this reason. The average age on the date of release was 42.2 for non-medical releases but just 36.1 for medical releases. Not surprisingly, the duration of service for those released for medical reasons was significantly less than for those released for non-medical reasons (17.2 vs. 23.5 years; there was not a significant difference in years in the reserves). Those released for medical reasons were also significantly more likely to have served at least once in an overseas deployment (66.2% vs. 56.8%), although the mean number of overseas deployments was unrelated to reason for release. Those with medical release were over 10% more likely to have had land-only service (as opposed to sea only, air only, or multiple).[8]

The following variables were not significantly related to whether the discharge was for medical reasons: current education and marital status.

The Relationship between Medical Release and Health

We consider medical release status as a principle predictor of respondents' economic position once released from the CF. As this relationship is likely due in large part to the respondents' health, we here describe how medical release status is reflective of clients' more general health position. Subsequent sections examine how medical release status and health are jointly important in understanding labor force and economic components of clients' lives.

As shown in Table 1, clients who were released for medical reasons are significantly less healthy than their counterparts who left the CF for other reasons. For example, 73.2% of respondents released for medical reasons report their health to be either "fair" or "poor" compared to 40.5% of those released for other reasons. Furthermore, level of pain experienced on a daily basis is significantly higher for those released for medical reasons than those released for other reasons: 28.0% of those released for medical reasons report "severe" pain, but just

[8] Compared to many armed forces, the CF is a unified force, which may be why over one-fifth of all the clients reported multiple elements. This is probably less likely when the army, naval and air forces are, as is common in most countries, distinct services.

13.5% of those released for non-medical reasons do so.

Based upon previous research using this survey, two diagnostic variables of importance are considered: post-traumatic stress disorder (PTSD) and depression. Both of these conditions are significantly more likely to be found among clients released for medical reasons. Over one-third of clients released for medical reasons are probable cases of depression (34.6%) They are about twice as likely to be so than those released for non-medical reasons (17.6%). Similarly, clients released for medical reasons are more than twice as likely to be probable cases of PTSD (20.5%) than the non-medical release group (8.2%).

PTSD and depression among this sample are discussed in considerable detail in a report by Asmundson (2000), but a few relationships are important for this analysis specifically. First and foremost, clients who meet the criteria for a probable diagnosis of depression or PTSD are less healthy, on average, than their counterparts who do not report the symptoms of these conditions. Table 3 illustrates that clients who have either probable or subthreshold PTSD are significantly more likely to report their health as either "fair" or "poor;" and the same is true of clients who report symptoms that reflect a probable diagnosis of depression. Therefore, regardless of whether a client meets disability criteria based upon a mental health diagnosis, depression and PTSD are common, and this has definite consequences for overall health status.

Table 3. Relationship between General Health Status and PTSD / Depression

	No PTSD	**Subthreshold PTSD**	**Probable PTSD**	**No Depression**	**Probable Depression**	***Total***
Excellent / Good	387 90.8%	23 5.4%	16 3.8%	382 89.7%	44 10.3%	426 100.0%
Fair / Poor	295 67.5%	54 12.4%	88 20.1%	284 65.0%	153 35.0%	437 100.0%
Total	682 79.0%	77 8.9%	104 12.1%	666 77.2%	197 22.8%	863 100.0%
	Chi-square 74.609***; tau-c –.240***			Chi-square 74.602***; tau-b -.294***		

Comorbidity between PTSD and depression has been well documented in the literature, both in general populations (Brady 1997; Davidson, Hughes, Blazer & George 1991; Kessler, Sonnega,

Bromet, et al. 1995) and in veterans (Card 1987; Eisen, Griffith, Xian, et al. 2004; Savoca and Rosenheck 2000). In terms of VAC clients, those who meet the criteria for probable PTSD are significantly more likely than their counterparts to also show symptoms of probable depression. This trend holds for clients who present symptoms of subthreshold PTSD as well. (See Table 4.)

Table 4. Relationship between PTSD and Depression

	Probable Depression	**No Depression**	***Total***
Probable PTSD	88 83.8%	17 16.2%	105 100.0%
Subthreshold PTSD	39 50.6%	38 49.4%	77 100.0%
No PTSD	71 10.4%	611 89.6%	682 100.0%
Total	198 22.9%	666 77.1%	864 100.0%

*Chi-square 314.307*** tau-c .409****

Health status is both a cause and a consequence of work activity and financial position (He & Marshall 2003, Marshall, Clark & Ballantyne 2001). It is likely that many VAC clients meet CF disability status as a result of their service career. But regardless of the origin of disability, it is apparent that medical release status represents an overall health disadvantage for VAC clients in terms of overall health perceptions, physical ability (pain), and mental health status (depression and PTSD). The causal analysis that follows attempts to uncover the relationship between these dimensions of health status and the financial situation of clients. Specifically, we aim to understand the utility of using medical release status as a risk marker for the overall health of VAC clients.

The Relationship between Medical Release and Post-Release Work Careers

The relationship between health and work is complex. There is some evidence that unemployment or, more broadly, unstable labor force participation can lead to poor health in the

overall population (Marshall, Clarke, & Ballantyne, 2001), but most researchers emphasize a reverse level of causation, reporting that health causes loss of work and subsequent labor force instability (He, Colantonio and Marshall, 2003). On the other hand, as Ruchlin and Morris (1992) have noted, it is not unusual for individuals to continue to work even while experiencing poor health. In the British General Household Surveys, it was found that given an opportunity for employment, most men with chronic illness continue to work (Bartley and Owen, 1996; He, et al., 2003).

In a general population study, Davidson et al. (1991:716) found that, of several demographic variables (sex, age, race, residence, marital status, education, employment full time, and history of unstable job behavior), "a history of job instability was the only variable on which PTSD cases differed from non-PTSD cases at a level which reached statistical significance." There is very little evidence on the relationship of PTSD or other mental health conditions and employment status in the case of military veterans (Marshall 2005). Savoca and Rosenheck (2000), analyzing data from the National Survey of the Vietnam Generation (surveying persons on active duty during that war), found that those with PTSD were significantly less likely to work, and also had lower wages. Anxiety disorders and major depression has similar, though not quite as strong, effects on employment rates. Prigerson, Mackiejeweki and Rosenheck (2001) used the National Comorbidity Study and isolated those who reported a combat-related event as their worst experience. Those in this group were 3.5 times more likely than those who reported a trauma not related to combat to report unemployment in the previous year. An association between PTSD and working (versus not working) was found by Satzick, Marmar and Weiss, et al. (1997). In general then, there is a small but growing body of evidence to suggest that PTSD does have an impact on subsequent employment status (for more details on these and related studies, see Marshall 2005).

For this reason, the next step we take in this section, a step that is still preliminary to the multivariate analyses in the next section, is to look more closely at post-release career characteristics depending on whether the VAC client had been discharged for medical reasons. VAC clients may have been released for a variety of reasons, even though to become a client they must qualify with a disability. As noted above, some reported health as a compulsory reason

for leaving the CF, while others cited health as a voluntary reason, or cited some other reason as the main factor leading to their release. The forces also accommodate members with disability, which is why some VAC clients (not considered in this paper) remain in active service. In short, the relationship between health and labor force participation is unclear in respect to both military service and non-military employment.

The bivariate analyses reported in Table 2, above, indicate that medical release status was not related to current employment status, to the mean number of different jobs held since release, or to the receipt of further education or training following release. However, there was a significant difference by reason for release in whether the client had ever worked for pay: 80.7% of those medically released but fully 91.6% ($p < .000$) of those released for other reasons reported having ever worked for pay since their release. This suggests a potential impact of disability on the capacity to engage in paid employment. In addition, clients released for medical reasons are also significantly more likely to have been unemployed since leaving the CF: 49.4% versus 42.0% ($p<.05$).[9]

To this point, we have engaged in a simple bivariate analysis, to give us deeper insight into: stability and instability in the military careers of VAC clients; the importance of medical versus non-medical release in relation to general (self-reported) health status, PTSD and depression; and the relationship between mental health status (especially PTSD) and occupational status in the years after discharge. We are now ready to build on this understanding by moving to a more complex, multivariate analysis. We are seeking an explanation of variability in levels of income and income security, focusing on the effects of medical release status, while taking into account the demographic factors of age and education, four different aspects or measures of health status (self-reported or 'current health' status, current level of pain, PTSD, and depression; some aspects of the military career; and employment stability.

[9] Additional evidence of career stability comes from a question that directly asked all VAC clients if they had changed or lost a job in the past 12 months. Regardless of service status, about three-quarters of clients reported no job changes. Of those VAC clients who had been discharged (who constitute the group of interest here), some found new employment, but we found considerable variability of career stability in that group.

Discharge Type, Subsequent Work Careers, and Income Security

It is evident that VAC clients differ significantly based upon medical release status: those released for medical reasons are younger, in poorer health, and have less fulfilled military careers. Furthermore, in terms of economic position and perceived stability, the aforementioned findings suggest a rather pessimistic outlook for financial well-being. Not only are those clients released for medical reasons significantly more likely to have lower levels of individual income, but they are also more negative about the future of their economic resources. This finding is interesting considering that in terms of post-release careers, medical release status is not a significant predictor of current employment status, average number of jobs held since discharge, or average periods of unemployment since release.

In order to better understand the factors that influence both current economic status and perceived financial stability, we performed a series of regression analyses. In each case, independent variables were added in a series of blocks: (1) medical release status; (2) general demographic characteristics; (3) health status; (4) military career indicators; and (5) either current employment status or work stability predictors. We focus on medical release status as a predictor of both current economic standing and perceived stability because of its potential significance for policy decisions made by Veterans Affairs Canada.

Table 5 presents five models seeking to predict income. The first, Model 1, incorporates medical release status and the demographic factors of age and education as predictors of income. This model shows that medical release status is a significant predictor of current income, such that those VAC clients released for medical reasons report lower levels of current income. This relationship remains while controlling for general characteristics (age of respondent and current level of education); however, in the subsequent models that include health status, military career indicators and civilian employment characteristics, medical release status loses its ability to predict income (although the relationship remains negative). As expected, education level is a consistent predictor of income: clients with advanced educational attainment report higher incomes. More specifically, compared to clients who have not completed secondary schooling, those who have achieved at least a secondary diploma report higher incomes; and, this relationship increases with each level of school completion. As we move from Model 1 to the

other models, incorporating successively more predictors, the significant relationship between education and income remains when controlling for all other predictors.

Model 2 includes the predictors in Model 1 but adds health indicators. Beyond medical release status, self-reports of poor health and increased levels of pain or discomfort significantly predict lower income levels for VAC clients. When additional predictors are included, in Models 3, 4 and 5, global reports of health become non-significant. Current level of pain is strongly significant in all models as a predictor of income; and in all models it is the distinction between moderate and severe pain, rather than between none/mild and moderate, that is significant.

Among the health indicators included in Model 2 are PTSD and depression. In model 2, those who are in the probability of depression category are much more likely to report lower income. This relationship, however, ceases to be significant (although there is still a trend in the same direction) when current employment status is introduced in Model 4, or when the two work stability variables are introduced in Model 5. In other words, depression consistently predicts lower income once released from the service, but this relationship loses significance once employment characteristics are considered.

The relationship between PTSD and income is a bit more complex. Specifically, in any of the models in which it is included (Models 2-5), a probable diagnosis of PTSD is not significantly related to income. However, clients who report symptoms characteristic of *subthreshold* PTSD have lower incomes compared to clients with no PTSD (Model3). This relationship is significant when military career variables and work stability measures are included (Model 5), but it shows only a strong but non-significant trend when current employment status is included instead of the work stability measures (Model 4).

Table 5. OLS Regression of Income on Medical Release Status, Demographics, Health, Military Career, & Post-Military Work Characteristics (N=863)[a]

	Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*
Medical Release Status (yes=1)	-.494***	-.267	-.116	-.028	-.055
	(.134)	(.138)	(.132)	(.127)	(.131)
Demographics					
Age	.013*	.008	-.010	.006	-.013*
	(.006)	(.006)	(.007)	(.007)	(.007)
Current Education (Secondary Not Completed)					
Completed Secondary Diploma	.363*	.334	.119	.113	.149
	(.181)	(.178)	(.170)	(.163)	(.167)
Some/Completed Post-Secondar	.692***	.653***	.451**	.455**	.491***
Diploma	(.159)	(.156)	(.152)	(.146)	(.150)
Completed Bachelor's/Post-	2.519***	2.370***	1.490***	1.428***	1.581***
Graduate Diploma	(.239)	(.236)	(.250)	(.240)	(.246)
Health					
Current Health (1=good/excellent)		.284*	.196	.180	.125
		(.138)	(.131)	(.125)	(.129)
Current Level of Pain (None/Mild)					
Moderate		-.160	-.115	-.094	-.135
		(.143)	(.136)	(.130)	(.133)
Severe		-.570**	-.551**	-.402	-.584***
		(.192)	(.182)	(.176	(.179)
PTSD (None)					
Subthreshold PTSD		-.374	-.474*	-.364	-.449*
		(.220)	(.209)	(.201)	(.205)
Probable PTSD		.271	.117	.116	.109
		(.225)	(.215)	(.207)	(.211)
Depression (1=yes)		-.517**	-.335*	-.236	-.240
		(.177)	(.168)	(.162)	(.166)
Military Career					
Element of Service (Land Only)					
Sea Only			.463*	.525**	.511**
			(.202)	(.194)	(.199)
Air Only			.185	.209	.178
			(.163)	(.156)	(.160)
Multiple Elements			.133	.171	.154
			(.145)	(.140)	(.132)

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Table 5. Continued.					
	Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*
Military Career (continued)					
Rank on Date of Release (Non-Commissioned Officer or Below)					
Junior/Subordinate Officer			.499**	.464**	.476**
			(.167)	(.161)	(.164)
General/Flag/Senior Officer			1.474***	1.425***	1.373***
			(.198)	(.190)	(.195)
Age on Date of Release			.024***	.024***	.027***
			(.007)	(.007)	(.007)
Number of Overseas Deployments			.159**	.160**	.172**
			(.055)	(.053)	(.054)
Current Employment Status (Civilian Labour Force)					
Unemployed, But Looking for Work				-1.282***	
				(.200)	
Inactive				-.881***	
				(.123)	
Work Stability Variables					
Ever Worked in					.662***
Civilian Labour Force					(.181)
Total Periods of Unemployment					-.144***
					(.027)
Constant	3.026	3.399	3.039	2.523	2.686
	(.387)	(.417)	(.417)	(.411)	(.464)
R^2	.144	.188	.284	.343	313
[a] Sample data are weighted and limited to male respondents who are age 65 or less and no longer actively serving in the CF.					
* p<.05; ** p<.01; *** p<.001					
Note: Coefficients are unstandardized regression weights (their standard errors are in parentheses).					

Model 5, in Table 5, hints at an interesting phenomenon that we cannot readily explain. Although the relationship is not significant, clients who are classified as probably PTSD report higher incomes than those who do not have symptoms of PTSD, while those with subthreshold PTDS have significantly lower incomes. One possible explanation is that the VAC benefits structure adequately accommodates clients who have probable PTSD, but does not do so for the

more ambiguous subthreshold PTSD. Subthreshold PTSD is not typically recognized diagnostically. Therefore, clients who report symptoms of PTSD but do not meet diagnostic criteria may be at a significant disadvantage in terms of financial position. These clients are likely to be facing unrecognized disadvantages in the civilian labour force, and without a diagnosis of PTSD, may not be receiving medical care or other measures of support that could enhance their civilian experience. At the very least, this analysis suggests that specifying subthreshold PTSD as a risk factor, rather than limiting the diagnostic categories to no-PTSD and PTSD, recognizes the potential for additional obstacles faced by clients who are distressed but do not meet typical diagnostic criteria (see Yarvis 2004 for a detailed analysis of subthreshold PTSD and its implications, based on the same Canadian Forces data set that we are using).

Turning now to Models 3, 4 and 5 in Table 5, it is evident that the military career of VAC clients is a strong determinant of income after release from service. Specifically, higher rank, additional overseas deployments, and a longer military tenure significantly predict higher income, controlling for all other variables. (Model 3) It appears that military service is protective for economic standing: VAC clients who remain in the service until later years (as measured by age on date of release) report higher income levels once released. Furthermore, compared to clients who serve exclusively in the land element of the Canadian Forces, those respondents who serve their entire career in the sea element report higher incomes; and, this relationship appears to be due to selectivity. Clients who serve only in the sea element of the CF have significantly higher educational attainment than other VAC clients. For instance, 17.4% of clients who served only in the sea forces have completed at least a Bachelor's degree, compared to 7.9% of those in the land forces only, 7.1% of those in the air forces only, and 8.9% of those who served in multiple elements of the CF.

As shown in Models 4 and 5, of Table 5, both current employment status and work stability measures predict VAC clients' present level of income. (These blocks of predictors were considered separately due to multicollinearity.) Regarding current employment status, clients who are unemployed or inactive report significantly lower annual incomes than those who are in the civilian labour force, controlling for all other variables. Similarly, work stability measures

significantly influence level of income. Clients who were in the civilian labor force at some point since release from the Canadian Forces have higher incomes; and, income is reduced for each additional period of unemployment that a client faces since release.

Considering the explanatory power of the models, each block of predictors adds to our ability to describe the relationship between VAC clients and income. The models with the most explanatory power are the full models that include measures of current employment status (R^2=.343) or work stability variables (R^2=.313). Overall, however, the analysis suggests that medical release status is not necessarily a valuable indicator of current income for VAC clients. It appears that education, military career characteristics, and civilian labour force measures are the most important predictors of economic standing. Yet, current level of pain or discomfort and criteria consistent with subthreshold PTSD, measures of health status that are significantly related to medical release status, do remain significant indicators of decreased income. So, although medical release status is mediated by more proximal determinants of economic position in these models, it may be that disability, in and of itself, shapes both the military career and pending civilian employment history of VAC clients.

In addition to current income, the Canadian Forces Survey measured feelings of income security. Canadian research based on a representative survey of people aged 45 and older has shown that objective income and subjective income security are distinct phenomena (Ballantyne & Marshall 2001). In a model incorporating demographic family income and assets, self-reported health and life satisfaction, family income and assets did predict dissatisfaction with expected future income and assets, but these relationships were also strongly conditioned by self-reported health (current health in our model) and life satisfaction.[10] Given that many factors mediate the relationship between income and feelings of income security, it is not surprising that our findings concerning factors associated with perceived economic security do not mirror the results found above, when we considered income.

[10] As well as age, marital status, gender, education, the extent to which women shared in providing family income, and assets data such as home and non-home property ownership, having financial responsibilities for others, and having large debts.

Table 6. Logistic Regression of Satisfaction with Current Income/Investments on Medical Release Status, Demographics, Health, Military Career, and Post-Military Work Characteristics of VAC Client Sample (N=863)[a]

	Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*
Medical Release Status (yes=1)	.575***	.797	.814	.756	.768
	(.170)	(.186)	(.190)	(.192)	(.195)
Demographics					
Age	1.034***	1.024**	1.022*	1.009	1.022*
	(.008)	(.009)	(.010)	(.011)	(.010)
Current Education (Secondary Not Completed)					
Completed Secondary Diploma	1.127	1.218	1.168	1.199	1.224
	(.224)	(.235)	(.241)	(.244)	(.242)
Some/Completed Post-Secondary	1.012	1.051	1.092	1.132	1.178
Diploma	(.199)	(.209)	(.216)	(.218)	(.218)
Completed Bachelor's/Post-	3.127**	3.027**	2.912*	2.864*	3.335**
Graduate Diploma	(.395)	(.407)	(.440)	(.451)	(.453)
Income	1.592***	1.515***	1.485***	1.530***	1.475***
	(.052)	(.054)	(.057)	(.060)	(.058)
Health					
Current Health (1=good/excellent)		1.306	1.286	1.339	1.257
		(.182)	(.185)	(.187)	(.187)
Current Level of Pain (None/Mild)		.852	.864	.846	.823
Moderate		(.194)	(.196)	(.198)	(.198)
		.428***	.433**	.386***	.395***
Severe		(.267)	(.270)	(.273)	(.272)
PTSD (None)					
Subthreshold PTSD		.849	.782	.791	.772
		(.297)	(.304)	(.308)	(.307)
Probable PTSD		.420*	.369**	.341**	.365**
		(.345)	(.351)	(.354)	(.352)
Depression (1=yes)		.427***	.442***	.445***	.450**
		(.245)	(.249)	(.253)	(.253)
Military Career					
Element of Service (Land Only)					
Sea Only			.713	.680	.705
			(.300)	(.306)	(.305)
Air Only			1.099	1.039	1.067
			(.238)	(.241)	(.240)
Multiple Elements			.708	.685	.741
			(.216)	(.219)	(.218)

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Table 6 Continued.					
	Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*
Military Chareer Continued					
Rank on Date of Release (Non-Commissioned Officer or Below)					
Junior/Subordinate Officer			1.301	1.349	1.293
			(.242)	(.245)	(.243)
General/Flag/Senior Officer			1.347	1.326	1.292
			(.330)	(.336)	(.336)
Age on Date of Release			1.002	1.001	.995
			(.010)	(.011)	(.011)
Number of Overseas Deployments			1.131	1.142	1.124
			(.084)	(.085)	(.084)
Current Employment Status (Civilian Labour Force)					
Unemployed, But Looking for Work				.561	
				(.333)	
Inactive				1.883***	
				(.199)	
Work Stability Variables					
Ever Worked in					.685
Civilian Labour Force					(.279)
Total Periods of Unemployment					.887**
					(.043)
-2 Log Likelihood	1006.161	932.927	922.832	905.298	910.827

[a] Sample data are weighted and limited to male respondents who are age 65 or less and no longer actively serving in the Canadian Forces.

* p<.05; ** p<.01; *** p<.001

Note: Odds ratios are presented (their standard errors are in parentheses).

Three separate indicators of confidence about financial standing are used: (1) ability of current income/investments to satisfy present needs, (2) ability of current income/investments to continue to satisfy needs, and (3) ability of future needs to be met. Table 6 presents the models predictive of satisfaction with current income and investments.

VAC clients, on average, are mixed in their perception of how well current income and investments meet their needs; and, medical release status is a significant predictor of satisfaction such that those clients who are released for medical reasons report less positive views of

economic resources. The logistic regression analysis presented in Table 6 confirms this finding: clients released for medical reasons are 42% less likely to report current satisfaction of needs, controlling for age, education, and income (Model 1; $p<.001$). However, as additional blocks of predictors are included, medical release status becomes non-significant. Likelihood ratio tests suggest that the addition of each block of variables significantly adds explanatory power to the model.[11] Generally, current income and measures of health status are the most important predictors of satisfaction with current economic resources. For each additional $10,000, a client is between 53% (Model 4) and 48% (Model 5) more likely to report that current needs are being met. Education also has a measurable effect, across all five models, especially when contrasting those with a bachelor's degree to those with less than a high school education.

Health status in the general sense does not significantly predict current economic satisfaction, as it did in the survey of the Canadian population noted above (Ballantyne & Marshall 2001:163), but current level of pain, PTSD and depression are significant predictors. Clients who report severe levels of pain or discomfort are 61% less likely (Models 4 and 5) to feel satisfied with current income and investments compared to those experiencing mild (or no) pain. This relationship is not mediated by current employment status.

Furthermore, both depression and probable PTSD significantly predict dissatisfaction with current income and investments. Clients who meet the criteria for a diagnosis of depression are 55% (Model 4) and 50% (Model 5) less likely to be satisfied with their current economic position. Although subthreshold PTSD is related to dissatisfaction with financial status, this association is not significant. This finding is interesting when taken in consideration with the previous regression that found subthreshold PTSD to be a significant predictor of lower income. Perhaps, because these clients are not likely to be diagnosed with PTSD, they consider their symptoms to be temporary or under control, thus not a continued obstacle to economic position.

In terms of measures of employment, those clients who are inactive are 88% more likely to report satisfaction with current resources, which is interesting in light of the fact that these men tend to have lower levels of income. Furthermore, clients who are unemployed do not report significantly lower levels of satisfaction with current income and investments when compared to

[11] Calculations of likelihood ratio tests are not included in this paper. Information is available upon request.

those currently in the labour force (Model 4 of Table 6). It may be that unemployment is considered a temporary situation; but, when looking at work stability, experiencing repeated periods of unemployment is a significant predictor of lower levels of satisfaction. For each additional period of unemployment, a client is 11% less likely to have a positive perception of economic well-being (Model 5).

In sum, level of satisfaction with current income and investments seems primarily dependent upon current income and health status, with education, current employment status and measures of work stability adding explanatory power as well. Interestingly, clients who are inactive in the civilian labour force report lower levels of income yet greater satisfaction with this standard. This is not simply due to such clients being older and likely to assume they need stretch their income or assets over fewer years (a hypothesis raised by Ballantyne & Marshall 2001), because this relationship persists when controlling for age. Similarly, clients who have been employed in the civilian labour force at some point since release do have higher incomes on average, but this indicator does not significantly predict satisfaction with economic status. Thus, a client's post-release employment career directly affects economic standing, yet this relationship does not necessarily lead to a predicable sense of financial security. Further complicating this relationship is the finding that military career does not significantly foster a sense of economic security in the present sense, although it does predict clients' economic position. What is clear however, is that although health status is not the greatest predictor of income once other factors are taken into account, it continues to influence client's perceptions of how adequately prepared they are for meeting their needs. Healthier clients appear to anticipate that they will remain in good health into the future, which will in turn allow them to remain active in employment activities that will enhance economic position.

When clients are asked to speculate about how current income and investments will *continue* to satisfy their needs, a similar scenario arises (See Table 7.) Generally, health status and income remain significant predictors of satisfaction; moreover, educational attainment and military career characteristics become valuable resources. For each additional $10,000, clients are between 59% (Model 4) and 54% (Model 5) more likely to report continued satisfaction with

Table 7. Logistic Regression of Continued Satisfaction of Current Income / Investments on Medical Release Status, Demographics, Health, Military Career, and Post-Military Work Characteristics of VAC Client Sample (N=863)[a]

	Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*
Medical Release Status (yes=1)	.693*	1.007	.997	.965	1.029
	(.181)	(.199)	(.204)	(.205)	(.207)
Demographics					
Age	1.018*	1.005	1.005	.998	1.003
	(.009)	(.009)	(.011)	(.011)	(.011)
Current Education (Secondary Not Completed)					
Completed Secondary Diploma	1.255	1.315	1.397	1.411	1.433
	(.237)	(.248)	(.255)	(.256)	(.256)
Some/Completed Post-Secondary	1.251	1.281	1.429	1.486	1.525
Diploma	(.212)	(.220)	(.229)	(.231)	(.231)
Completed Bachelor's/Post-	2.001*	1.918	2.771**	2.749**	3.209**
Graduate Diploma	(.340)	(.349)	(.387)	(.390)	(.393)
Income	1.555***	1.505***	1.574***	1.592***	1.540***
	(.049)	(.051)	(.056)	(.058)	(.057)
Health					
Current Health (1=good/excellent)		1.535*	1.556*	1.601*	1.480*
		(.184)	(.187)	(.188)	(.189)
Current Level of Pain (None/Mild)					
Moderate		.845	.839	.829	.808
		(.189)	(.191)	(.193)	(.194)
Severe		.557*	.596	.572	.555*
		(.283)	(.287)	(.289)	(.289)
PTSD (None)					
Subthreshold PTSD		.630	.614	.628	.617
		(.329)	(.335)	(.337)	(.336)
Probable PTSD		.142***	.141***	.133***	.141***
		(.483)	(.482)	(.484)	(.482)
Depression (1=yes)		.562*	.573*	.589	.604
		(.270)	(.275)	(.278)	(.278)
Military Career					
Element of Service (Land Only)					
Sea Only			.569	.548	.595
			(.311)	(.314)	(.313)
Air Only			.881	.854	.876
			(.236)	(.237)	(.237)
Multiple Elements			.585*	.576*	.615*
			(.225)	(.227)	(.228)

Continued on Next Page.

Table 7 Continued.					
	Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*
Military Career Continued					
Rank on Date of Release (Non-Commissioned Officer or Below)					
Junior/Subordinate Officer			1.005	1.019	1.014
			(.241)	(.243)	(.243)
General/Flag/Senior Officer			.509*	.487*	.477*
			(.301)	(.304)	(.305)
Age on Date of Release			1.009	1.010	1.009
			(.011)	(.011)	(.011)
Number of Overseas Deployments			.934	.939	.953
			(.082)	(.083)	(.083)
Current Employment Status (Civilian Labour Force)					
Unemployed, But Looking for Work				.475*	
				(.379)	
Inactive				1.350	
				(.199)	
Work Stability Variables					
Ever Worked in					1.285
Civilian Labour Force					(.283)
Total Periods of Unemployment					.857***
					(.047)
-2 Log Likelihood	987.306	909.845	897.890	889.412	886.507

[a] Sample data are weighted and limited to male respondents who are age 65 or less and no longer actively serving in the Canadian Forces.

* p<.05; ** p<.01; *** p<.001

Note: Odds ratios are presented (their standard errors are in parentheses).

current resources, controlling for all other variables. This is a higher level of income security than is reported for current needs. The difference may reflect the anticipation of increased financial resources on reaching pension age for Old Age Security and the Canada/Quebec Pension Plans. Education is important in that the highest level of attainment (completing a bachelor's or post-graduate diploma) results in a client being between 1.75 (Model 4) and 2.21 (Model 5) times more likely to report continued economic stability, compared to those who do not complete a secondary diploma.

Perception of overall health is a significant predictor of continued economic satisfaction. Clients who are in good or excellent health are between 60% (Model 4) and 48% (Model 5) more likely to report positive outlooks for financial standing. Experiencing severe pain results in negative perceptions of financial security, but this variable does not maintain the same explanatory power as in previous analyses. Similarly, depression predicts lower levels of economic security, but this relationship is not significant. Again, this may be due to the perception that depression is a temporary condition. Clients with probable PTSD, however, are very pessimistic about their economic future. If a client meets the criteria for a probable diagnosis of PTSD, he is 86% less likely to feel that current income and investments will continue to satisfy needs into the future.

Military career does influence client's perceptions of continued economic security. Men who achieve the highest ranks of the military are significantly *less* likely to feel that current income and investments will translate into future security when compared to non-commissioned officers. General, flag, or senior officers are between 51% (Model 4) and 52% (Model 5) less likely to foresee continued satisfaction with present resources. Compared to those of lower rank, they can expect a higher drop in income as they come to rely on government pensions, and thus anticipate having to reduce their standard or cost of living in retirement more than those of lower rank and income. It is generally the case in Canada that those with the lowest incomes gain in retirement whereas those with higher incomes experience a drop in income with formal retirement. In addition, service in multiple elements of the Canadian Forces predicts lower levels of satisfaction when compared to those clients who served exclusively in the land element.

Overall, likelihood ratio tests indicate that the addition of each block of variables significantly increases the fit of each model to the data. Current employment status is a significant predictor of a perception of continued economic security in terms of unemployment, but not retirement. Specifically, clients who are currently unemployed are 52% less like to feel confident about their future economic position that are those still working. Interestingly, clients who are inactive are 35% more likely to feel secure about their continued economic position than those who are currently employed, although this relationship is not significant (Model 4). In terms of work stability, multiple periods of unemployment do predict more negative attitudes

about future financial standing: for each additional period of unemployment, VAC clients are 14% less likely to perceive continued satisfaction with economic resources (Model 5).

The final measure of perceived economic security concerns a general prediction about future resources and economic needs. (See Table 8) The results from this analysis are similar to the findings for current levels of satisfaction: current health status and income level are the main predictors of future satisfaction. Military career is not a factor in terms of feeling secure about finances into the future economic security, beyond the pessimism generated from serving in multiple elements of the CF. (However, this variable loses significance when work stability measures are included.)

Again, clients in good health are more likely to perceive future economic security, as are those who experiencing no or only mild levels of pain. Educational attainment is significant such that attaining some level of education beyond a secondary diploma predicts future economic satisfaction (whereas only the highest level of achievement – completing a Bachelor's degree or higher – was significant in the previous analysis). Clients who attempted some post-secondary education are between 72% (Model 4) and 77% (Model 5) more likely to feel that they will be financially secure in the future; and clients with the highest level of educational attainment, at least a Bachelor's degree, are between 1.56 (Model 4) and 1.88 (Model 5) times more likely to be optimistic about their economic future. Current employment status does not influence levels of future satisfaction in terms of unemployment as in previous analyses, but total periods of unemployment do influence feelings of security. In this analysis (as in the first but not the second measure of subjective income security) being inactive is related to enhanced perceptions of economic security. Compared to those who are currently in the civilian labour force, clients who are inactive are 50% more likely to feel they will be financially secure in the future.

Table 8. Logistic Regression of Future Satisfaction with Income/Investments on Medical Release Status, Demographics, Health, Military Career, and Post-Military Work Characertistics of VAC Client Sample (N=863)[a]

	Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*
Medical Release Status (yes=1)	.639**	.952	.984	.943	.997
	(.173)	(.192)	(.196)	(.198)	(.200)
Demographics					
Age	1.010	.996	.991	.982	.990
	(.008)	(.009)	(.010)	(.011)	(.010)
Current Education (Secondary Not Completed)					
Completed Secondary Diploma	1.376	1.495	1.458	1.477	1.487
	(.228)	(.241)	(.247)	(.248)	(.248)
Some/Completed Post-Secondary	1.488	1.591*	1.677*	1.725*	1.771*
Diploma	(.203)	(.214)	(.222)	(.223)	(.224)
Completed Bachelor's/Post-	2.250*	2.033*	2.587*	2.556*	2.875**
Graduate Diploma	(.348)	(.357)	(.391)	(.395)	(.396)
Income	1.587***	1.532***	1.554***	1.585***	1.532***
	(.050)	(.053)	(.056	(.059)	(.057)
Health					
Current Health (1=good/excellent)		1.694**	1.689**	1.731**	1.631**
		(.181)	(.184)	(.186)	(.186)
Current Level of Pain (None/Mild)					
Moderate		.932	.936	.9252	.905
		(.190)	(.192)	(.193)	(.194)
Severe		.501*	.533*	.496*	.500*
		(.273)	(.277)	(.280)	(.278)
PTSD (None)					
Subthreshold PTSD		.444*	.433**	.434**	.432**
		(.319)	(.323)	(.325)	(.324)
Probable PTSD		.189***	.171***	.162***	.170***
		(.386)	(.387)	(.390)	(.386)
Depression (1=yes)		.606*	.629	.637	.654
		(.253)	(.255)	(.258)	(.257)
Military Career					
Element of Service (Land Only)					
Sea Only			.739	.713	.759
			(.304)	(.307)	(.305)
Air Only			1.195	1.152	1.182
			(.237)	(.238)	(.237)
Multiple Elements			.627*	.619*	.652
			(.219)	(.220)	(.220)

Continued on Next Page

Table 8 Continued.					
	Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*
Military Career Continued					
Rank on Date of Release (Non-Commissioned Officer or Below)					
Junior/Subordinate Officer			.843	.851	.843
			(.240)	(.242)	(.241)
General/Flag/Senior Officer			.674	.654	.645
			(.304)	(.307)	(.307)
Age on Date of Release			1.014	1.014	1.013
			(.011)	(.011)	(.011)
Number of Overseas Deployments			1.011	1.015	1.022
			(.082)	(.082)	(.082)
Current Employment Status (Civilian Labour Force)					
Unemployed, But Looking for Work				.682	
				(.335)	
Inactive				1.504*	
				(.196)	
Work Stability Variables					
Ever Worked in					1.122
Civilian Labour Force					(.272)
Total Periods of Unemployment					.897*
					(.044)
-2 Log Likelihood	1026.491	930.972	920.190	912.822	913.754

[a] Sample data are weighted and limited to male respondents who are age 65 or less and no longer actively serving in the Canadian Forces.

* p<.05; ** p<.01; *** p<.001

Note: Odds ratios are presented (their standard errors are in parentheses).

In all models of economic position and financial security, medical release status is a significant predictor, such that clients who are released for medical reasons report lower levels of current income and decreased perceptions of their ability to meet financial needs into the future, when controlling for demographic variables (including income for analyses of financial security). In all cases, this relationship is mediated by more specific measures of health status. We will discuss the overall implications of this below.

Conclusions, Implications, and Limitations

Restricting our analysis to male clients of VAC who are no longer serving, we have painted a rather complex picture of the post-discharge work and income security related situation. This complexity suggests the need for finely tuned policy initiatives to enhance the economic security of VAC Canadian Forces clients.

While we have focused on the differences among veterans discharged for medical reasons or for other reasons, we should not lose site of the commonalities. For instance, just over half of the VAC Canadian Forces clients, regardless of medical release status, reported their health to be either fair or poor. In addition, two-thirds of all clients reported moderate or severe pain. In terms of post-release employment, while 88% of clients have been employed at some point in the civilian labour force, almost half reported having been unemployed at some point since their discharge (44%). Furthermore, while measures of income security varied significantly by reason for discharge, clients were largely pessimistic about their ability to meet financial needs in a general sense, particularly when looking into the future.

Beyond these commonalities, health status clearly differentiates VAC clients. Thus, although there are overall trends in post-military careers and perceptions of economic security, having been released for medical reasons places certain clients at risk for disadvantaged economic status. And different dimensions of health, measured in this analysis by subjective current health, levels of pain, probably PTSD, and depression, have different direct and conditioning effects that influence both objective income status and subjective feelings of economic security.

The Canadian government has long accepted responsibility for the well-being of those who have served in the Canadian Forces The evolution of this acceptance of responsibility is well documented in the papers in Neary and Granatstein's book, *The Veteran's Charter and Post-World War II Canada* (1998), and the reference paper, *The Origin and Evolution of Veterans Benefits in Canada, 1914-2004* (Canadian Forces Advisory Council, VAC), 2004). Nevertheless, there remains an unclear line demarcating when responsibility for those discharged ends for the Canadian Forces and when that responsibility is assumed by VAC. For instance, some benefits are available only if a client is released for medical reasons, yet other benefits may be received

regardless of reason for discharge.

Historically, VAC benefits included both medical care and income security, although for the past few decades, the shift has been towards health benefits. Criteria for eligibility are changing, as the definition of "veteran" has itself changed. Only in March 2001 was the definition of veteran broadened beyond those with active service in a military conflict zone, to include all those who wore a uniform. A veteran is a veteran, is a veteran. There will no doubt be eligibility changes following from the change in definition of veteran.

The Canadian Forces and VAC are currently actively collaborating to ease the transition from the military to post-discharge life. The nature of this transition, as we have shown, is partially influenced by the reason for discharge. Moreover, we have shown that reason for discharge is associated with subsequent occupational stability and income security. For these reasons we think it is important to clarify the significance of the reason for discharge. Although our analyses indicate that the relationship between medical discharge status and both income and economic security is mediated by more proximal measures of health status and work experiences, the distinction between medical and non-medical discharge remains an important marker for these experiences. Medical release status is therefore administratively consequential.

Potential Limitations

This analysis, as is typical of most secondary analyses, has been limited by measurement choices that were not made with our specific focus in mind, and by our need to construct new measures. Some problems with the format of the survey questionnaire probably increased the extent of missing data, and may have influenced the validity of some responses in ways we cannot define. Nevertheless, the survey provides a unique opportunity to examine factors associated with differential income security outcomes among Canadian Forces clients of Veterans Affairs Canada. Our analysis has not singled out those who may be suffering from post-traumatic stress disorder, which has however been elsewhere examined for VAC with these data (Asmundson, 2000). However, we have placed the examination of PTSD and depression in the wider context of disability and its relationship to occupational status and income security. A more detailed analysis of PTSD and other mental health issues would be ideal but would require a larger sample size than available through this survey. Certainly our results would support the

importance of greater clinically-based investigations of those discharged for medical reasons following overseas deployments, who may, among those released, be the most severely affected in their subsequent health, working careers and income status.

The main limitation of this study is its cross-sectional nature. The Canadian Forces are currently considering initiating longitudinal surveys of armed forces personnel. These would be invaluable to sort out the complex causal pathways we have been exploring. Any longitudinal survey to be developed should ideally be done so in collaboration with Veterans Affairs Canada, which has primary responsibility for the health needs of Canadian veterans, as well as a historic mandated interest in their economic security.

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Appendix

The following tables display information from the missing data analysis performed on the overall sample of the VAC Canadian Forces Survey.

Table A. Missing Data Analysis for all Included Variables (N=1566)[a]

	Frequency	Percent	Valid Percent
Demographic Characteristics			
Current Education			
Secondary Not Completed	355	22.7	23.7
Completed Secondary	351	22.4	23.4
Some / Completed Post-Secondary Diploma	682	43.6	45.5
Completed Bachelor's or Post-Grduate Degree	111	7.1	7.4
Total	1499	95.7	100.0
Missing	67	4.3	
Total	1566	100.0	
Total Personal Income			
Less Than $10,000	77	4.9	5.5
$10,000 - $19,999	209	13.3	15.0
$20,000 - $29,999	371	23.7	26.7
$30,000 - $39,999	310	19.8	22.3
$40,000 - $49,999	200	12.8	14.4
$50,000 - $59,999	95	6.1	6.8
$60,000 - $69,999	44	2.8	3.2
$70,000 - $79,999	28	1.8	2.0
$80,000 or More	58	3.7	4.2
Total	1392	88.9	100.0
Missing	174	11.1	
Total	1566	100.0	
Military Career Characteristics			
Element of Service			
Land Only	845	54.0	54.4
Sea Only	138	8.8	8.9
Air Only	239	15.3	15.4
Multiple Elements	331	21.1	21.3
Total	1553	99.2	100.0
Missing	13	0.8	
Total	1566	100.0	
Rank on Date of Release			
Non-Commissioned Officer or Below	1169	74.6	77.4
Junior/Subordinate Officer	180	11.5	11.9
General/Flag/Senior Officer	161	10.3	10.7
Total	1510	96.4	100.0
Missing	56	3.6	
Total	1566	100.0	

	Frequency	Percent	Valid Percent
Employment Characteristics			
Current Employment Status			
Civilian Labour Force	718	45.8	49.4
Unemployed, but Looking	120	7.7	8.3
Inactive	614	39.2	42.3
Total	1452	92.7	100.0
Missing	114	7.3	
Total	1566	100.0	
Ever Worked for Pay			
Yes	1305	83.3	86.1
No	211	13.5	13.9
Total	1516	96.8	100.0
Missing	50	3.2	
Total	1566	100.0	
Income / Invesments Satisfaction			
Satisfaction with Current Level			
Yes	726	46.4	47.2
No / Don't Know	812	51.9	52.8
Total	1538	98.2	100.0
Missing	28	1.8	
Total	1566	100.0	
Current Level Will Continue to Satisfy Needs			
Yes	501	32.0	32.6
No/Don't Know	1034	66.0	67.4
Total	1535	98.0	100.0
Missing	31	2.0	
Total	1566	100.0	
Level of Future Satisfaction of Needs			
Very Well / Adequate	605	38.6	60.7
Not Very Well / Totally Inadequately / Don't Know	933	59.6	39.3
Total	1538	98.2	100.0
Missing	28	1.8	
Total	1566	100.0	

[a] Data are not weighted for missing cases analysis; sample islimited to male respondents who are age 65 or less and no longer actively serving in the Canadian Forces.

Table B. Missing Data Analysis for all Included Variables (N=1566)[a]

	Frequency	Percent	Valid Percent
Health Status			
Medical Release Status			
Yes	484	30.9	31.7
No	1043	66.6	68.3
Total	1527	97.5	100.0
Missing	39	2.5	
Total	1566	100.0	
General Health Status			
Good / Excellent	712	45.5	45.7
Fair / Poor	845	54.0	54.3
Total	1557	99.4	100.0
Missing	9	0.6	
Total	1566	100.0	
Current Level of Pain			
None / Mild	459	29.3	30.2
Moderate	746	47.6	49.1
Severe	313	20.0	20.6
Total	1518	96.9	100.0
Missing	48	3.1	
Total	1566	100.0	
PTSD - DSM Criteria[b]			
Probable PTSD	187	11.9	13.1
Subthreshold PTSD	145	9.3	10.1
No PTSD	1098	70.1	76.8
Total	1430	91.3	100.0
Missing	136	8.7	
Total	1566	100.0	
Depression - CES-D Cutoff[b]			
Probable Depression	406	25.9	27.6
No Depression	1066	68.1	72.4
Total	1472	94.0	100.0
Missing	94	6.0	
Total	1566	100.0	

	Min - Max	Mean	Standard Deviation
Demographic Characteristics			
Current Age	20 - 65	52.84	9.97
Valid Total	1554		
Missing	12		
Total	1566		
Military Career Characteristics			
Age on Date of Release	17 - 63	39.37	10.19
Valid Total	1524		
Missing	42		
Total	1566		
Number Overseas Deployments	0 - 5	1.04	1.12
Valid Total	1518		
Missing	48		
Total	1566		
Employment Characteristics			
Periods of Unemployment	0 - 11	1.38	2.08
Valid Total	1290		
Missing	276		
Total	1566		

[a] Data are not weighted for missing cases analysis; sample islimited to male respondents who are age 65 or less and no longer actively serving in the Canadian Forces.

[b] Data include cases with imputed values. See *Methodology Section* for discussion.