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Evaluation of an Employment Intervention for Veterans Transitioning From the Military

A Randomized Controlled Trial

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Abstract: Military personnel face numerous challenges transitioning from military jobs to meaningful civilian employment. The Independence Project compared an innovative employment program (National Career Coach Program) with standard employment services (Local Community Resources) in a randomized controlled trial. Study participants were transitioning veterans with self-reported service-connected disabilities seeking permanent employment. The primary outcomes were paid employment and disability ratings over 1 year. Secondary outcomes included health and well-being. At 1-year follow-up, National Career Coach Program participants were significantly more likely to work, had significantly greater earnings, and reported significantly greater improvements in physical and mental health compared with participants assigned to Local Community Resources. Both groups increased in disability ratings over 12 months, with no difference between groups. Multifaceted supports delivered by the National Career Coach Program increased employment, earnings, mental health, and physical health over 1 year. These significant differences appeared even though control group participants achieved considerable employment success.

Key Words: Military veterans, employment, career mentoring, veteran transition services

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Each year, approximately 200,000 men and women separate from the US military (GAO, 2019). Transitioning veterans experience stress related to changes in daily schedules, home life, and income, as well as the shift from military to civilian culture (Mobbs and Bonanno, 2018). Two thirds of service men and women have significant difficulty transitioning from the military (Prudential, 2012). Post-9/11 veterans (*i.e.*, active military service after September 2001) report that the greatest challenge during this transition is finding a good job—one that matches their aptitudes and interests as well as their military training and work experiences (Aronson et al., 2019; Dexter, 2020; Keeling et al., 2018; Prudential, 2012).

In the year after discharge, unemployment rates are higher among young veterans than their civilian counterparts (Loughran, 2014). Some evidence suggests that post-9/11 veterans have greater challenges than earlier cohorts; two surveys of post-9/11 veterans found that more than 80% did not have a job when they left the military compared with 67% of veterans from earlier cohorts (Castro et al., 2013; Castro and Kintzle, 2017). The unemployment rate is especially high among veterans with service-connected disabilities (US Bureau of Labor Statistics, 2020). This is of particular concern because employment is a critically important aspect of human welfare. In addition to income, employment provides people with a daily structure, sense of purpose, and social connectedness. Furthermore, employment is associated with better mental health (Drake and Wallach, 2020).

Among more than 20,000 public and private programs available to veterans providing help for legal, housing, financial, health care, social connectedness, and other needs, employment services are unmistakably the most widely sought and used in the first few months after separation from the military: a large national survey found 54% of veterans had received help from a vocational program (Perkins et al., 2020). However, the survey also found that vocational programs typically provided passive, low-intensity services such as online job banks (used by 47% of respondents). Veterans rarely received job placement services (12%) or career counseling and mentoring (6%).

The federal government has invested heavily in employment programs for veterans, although few have been rigorously evaluated (Collins et al., 2014). Among employment interventions for veterans, only one model distinguishes itself as evidence-based. The Individual Placement and Support model of supported employment has been shown effective for veterans with various health conditions (Davis et al., 2018b; LePage et al., 2020; Ottomanelli et al., 2014; Resnick and Rosenheck, 2007). Other employment approaches for veterans offered by the Veterans Health Administration through the Vocational Rehabilitation program have included transitional employment in mostly minimum-wage jobs reserved for veterans in veteran medical centers and in the community (Abraham et al., 2017; Davis et al., 2019; Penk et al., 2010). However, with the exception of transitional work in the community, these vocational programs have had limited success in helping veterans attain permanent community jobs. The Veteran Readiness and Employment program, administered by the Veterans Benefits Administration (VBA), provides job training, employment accommodations, resume development, and job-seeking skills coaching (https://www.benefits.va.gov/vocrehab/). Employment program options for veterans outside the Department of Veterans Affairs include employment services administered by the US Department of Labor (Trutko et al., 2016). None of these initiatives have culminated in a well-defined model with demonstrated effectiveness.

Many veterans also experience mental and physical health conditions after their service (Blore et al., 2015; Chandrasekaran, 2014; McNally and Frueh, 2013; Oster et al., 2017). In a 2016 survey of more

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than 9000 newly separated veterans, 53% reported chronic physical conditions, and 33% reported chronic mental health conditions (Vogt et al., 2020). In 2019, 4.7 million veterans received compensation from the VBA for a service-connected disability, including 1.8 million (41%) of all post-9/11 veterans, more than twice the rate for older veterans (US Bureau of Labor Statistics, 2020). Severity of disability ratings has also increased substantially (Tsai and Rosenheck, 2016). Veterans with high disability ratings are much less likely to be employed. In 2020, the employment rate for post-9/11 veterans with a high disability rating (60% or more) was only 56%, compared with 84% for veterans with a lower rating (US Bureau of Labor Statistics, 2021).

Unlike the Social Security Administration disability system in which beneficiaries risk reduced cash benefits if their earnings reach threshold levels, thus creating a disincentive to work (Maestas et al., 2013), the VBA only rarely reduces disability benefits based on employment earnings (Office of Inspector General, 2021; Sayer et al., 2004). (An exception is that some enrollees in the Individual Unemployability program are subject to additional work restrictions.) Nevertheless, income from disability payments may itself decrease labor force participation because of reduced financial need (Autor and Duggan, 2007).

Despite numerous indicators of stress among veterans with service-related disabilities, minimal research has addressed their transition from military to civilian life (Derefinko et al., 2019). The purpose of this study was to examine intensive versus standard employment support programs for service members with service-connected disabilities transitioning from the military. To achieve the highest level of evidence, we conducted a randomized controlled trial.

METHODS

Overview

Independence Project was a randomized controlled trial comparing an intensive employment model (National Career Coach Program [NCCP]) with standard employment services (Local Community Resources [LCR]). The Westat Institutional Review Board approved the study, which followed the principles outlined in the Declaration of Helsinki.

Interventions

The NCCP has four components: a 4-day in-person employment skills seminar held in Alpharetta, GA; up to 18 months of personalized job coaching provided by telephone and other remote contact; a human capital fund to pay for expenses of securing a job (*e.g.*, travel, clothing, computers, professional organization fees); and an opportunity to earn a bonus for employment earnings (up to 25% of monthly earnings, capped at $825 a month). The employment skills seminar and job coaching used an individual mentor/coach relationship for program service delivery and included specific training components associated with better employment outcomes in a large-scale longitudinal study of transitioning veterans (*i.e.*, career planning, military skills translation, resume development, networking, and interview practice) (Perkins et al., 2021; Vogt et al., 2018).

LCR consist of referral to three local service providers that offer veterans training, financial assistance, and paid work experiences: The Veterans Health Administration vocational rehabilitation services, the state-federal Vocational Rehabilitation program, and the US Department of Labor American Job Center.

Sampling and Enrollment

The sample consisted of enlisted men and women transitioning from the military and seeking employment. Eligibility criteria included the following: less than the age of 45, at least 6 months of active military service with an Honorable or General discharge, within 6 months before separation or 12 months after separation, either without civilian employment (before separation) or unemployed or working in short-term stop-gap jobs (after separation), and receiving or applying for a VBA service-connected disability rating and compensation.

The study recruited participants through letters, social media, online sources, and word of mouth. Using mailing lists from two data repositories maintained by the VA, we sent recruitment letters to 28,000 recently discharged veterans. Online advertisements directed prospective respondents to a study Web site featuring a self-administered, qualifying survey (a series of screening questions that helped determine eligibility) and an invitation to those passing the screening questions to send contact information to the research team.

Trained interviewers conducted all research interviews by telephone. After determining that a prospect was eligible for the study, enrollment comprised four steps: informed consent, baseline interview, randomization, and connecting the participant with the assigned condition.

Measures

Background Characteristics

We obtained detailed demographic information and details on military service, adapting questions from prior studies (Davis et al., 2018a).

Employment Measures

Our employment measures assessed paid employment, including income-generating self-employment. At each interview, we measured employment outcomes using the Dartmouth Vocational Update Form (Drake et al., 1996). The interview data were then used to construct a 12-month timeline for employment and to determine monthly employment status, total earnings, number of weeks worked, and time to first job. We assessed job satisfaction using a single-item global satisfaction measure, which has been associated with job retention (Resnick and Bond, 2001), and a single-item satisfaction with vocational services measure, which has been associated with retention in services (Kukla and Bond, 2009).

Service-Connected Disability

When first interviewed, participants were in various stages of applying for and receiving VA disability ratings; we therefore collected this information over the course of the baseline and subsequent interviews. We also obtained formal documentation of disability ratings from the VBA: 132 official ratings for 107 veterans, showing exact agreement for 81 (75.7%) veterans, and agreement within 10% for 99 (92.5%) veterans. We used the more complete self-reported disability ratings in the analyses.

Satisfaction With Life Scale

This five-item scale is a widely used self-report scale to measure life satisfaction (Diener et al., 1985). The item response scale ranges from 1 (extremely dissatisfied) to 7 (extremely satisfied). The scale score is the sum of the five items, with value ranging from 5 to 35. Scores greater than 25 reflect overall satisfaction with life. The scale has good convergent and discriminant validity and temporal stability (Pavot and Diener, 1993). The internal consistency coefficient (Cronbach's alpha) in the study sample was .85.

Veterans Rand-12

This measure, a slight modification of the well-validated SF-12 (Ware Jr et al., 1996), is a 12-item self-reported assessment of health widely used in veteran populations (Selim et al., 2009). The Veterans Rand-12 (VR-12) yields two subscale scores, the Mental Component Score (MCS) and the Physical Component Score (PCS). The VR-12 is psychometrically valid, with good internal consistency, test-retest reliability, and criterion-oriented validity (Salyers et al., 2000). The internal consistency coefficients (Cronbach's alpha) for MCS and PCS were .89 and .85, respectively, in the study sample.

Patient Health Questionnaire-9

The Patient Health Questionnaire-9 (PHQ-9) is a nine-item self-report depression checklist that has been well validated in two large studies and has been used in many medical surveys (Kroenke and Spitzer, 2002). Respondents rate items on a scale from 0 to 3, and a summative total score ranges from 0 to 27. A score of 10 or more indicates at least moderate depression. The internal consistency coefficient (Cronbach's alpha) for the PHQ-9 was .88 in the study sample.

InCharge Financial Distress Financial Well-Being

This eight-item checklist measures financial distress/financial security (Prawitz et al., 2006). Respondents rate items on a 10-point scale. The mean item score ranges from 1.0 to 10.0, with higher scores reflecting less distress. The checklist has good psychometric properties, including content and construct validity and sensitivity to change (Garman et al., 2007). The internal consistency coefficient (Cronbach's alpha) was .95 in the study sample.

Substance Use

Participants reported use in the last year of the following substances: tobacco, alcohol, marijuana and cannabis products, illegal drugs, and prescribed opioids. The interview also included questions about any use of the identified substances, frequency of use in the last week for the first four substances, and the duration of use for prescription opioids.

Statistical Analyses

We conducted exploratory data analysis on all relevant measures to determine their distributional properties (Tukey, 1977), examining the internal reliability (Cronbach's alpha) for all standardized scales. The primary analyses used standard univariate tests (*t*-tests and chi-squares) comparing the NCCP to LCR, in one instance substituting the Mann-Whitney test for a measure with a highly skewed distribution. We examined group equivalence through comparison of baseline characteristics. The main outcome analyses were end point analyses using cumulative outcomes for employment measures and change measures for disability ratings and self-report measures of health and well-being. The primary outcome was earnings from employment. For all analyses, we used a significance level of $p < 0.05$ (two-tailed).

We assessed monthly employment rates using univariate tests of independent proportions. In addition, a multivariate test examined overall significance of the monthly employment rates using SAS–PROC GLIMMIX (Littell et al., 2006), examining the group effect (NCCP versus LCR), time effect (12 monthly observational periods), and group-by-time interactions.

The analyses of earnings data were based on the sample completing at least one follow-up interview. The earnings analyses included earnings through the month of the last-completed interview. We computed the monthly earnings for the interview period for data that were available; for example, if a participant completed the 8-month interview but not the 12-month interview, we used the mean monthly earnings for the 8 months for which we had information. We also examined total reported earnings over the 12-month period. Employment outcomes also were examined outcomes for the worker sample, that is, the subgroup of participants who worked at least 1 day during the study period. Effect sizes (d) were calculated for all between-group differences in the full sample and the worker sample, using the standard formula for continuous measures (Cohen, 1988) and the arcsine transformation for dichotomous measures (Lipsey, 1990).

RESULTS

Between May 2018 and June 2019, we enrolled 229 participants, assigning 115 to NCCP and 114 to LCR. At baseline, the study participants reported significantly poorer adjustment and greater distress on several standardized measures, including life satisfaction, mental health, symptoms of depression, and financial distress, compared with published norms in military and civilian samples (Bond et al., in press). As shown in Table 1, with trivial exceptions, the two intervention groups did not differ at baseline on demographic, economic, service-connected disability, health measures, or percentage on active duty.

As shown in Figure 1, 105 (91.3%) NCCP participants and 102 (89.5%) LCR participants completed at least one follow-up interview; 98 (85.2%) NCCP participants and 84 (73.7%) LCR participants completed the 12-month interview. We compared the 207 participants (90%) who completed at least one follow-up interview with the 22 participants (10%) who did not complete any interviews after the baseline. Compared with participants who completed at least one follow-up interview, participants who dropped out were less educated, more likely to be married, and more likely to have a combat or protective service specialty. Examining the responses on standardized scales at baseline, participants who dropped out reported less life satisfaction on the Satisfaction with Life Scale (SWLS), more distress on the mental component of the VR-12, and more depression on the PHQ-9 (for details, see Table A in Online Appendix, Supplemental Digital Content 1, http://links.lww.com/JNMD/A136).

Service Use and Satisfaction

The majority of NCCP participants took full advantage of the four program components: 68% attended the in-person training, 98% made contact with their career coach, 72% used the human capital fund, and 78% of eligible participants received wage bonuses. By contrast, only a minority of LCR participants contacted American Job Centers (34%), state vocational rehabilitation agencies (13%), or VA vocational rehabilitation services (20%) in the first 4 months, and these numbers decreased in subsequent months.

The large majority of participants who connected with NCCP services reported satisfaction with the program at every follow-up interview (over 94% for every follow-up interview period except 12 months, when the percentage satisfied was 83%). Of the small minority accessing LCR services at 4 months, between 17% and 48% reported satisfaction with the services.

During the 1-year follow-up period, 43 LCR participants sought help from over 25 different employment programs other than those they were offered at enrollment, including 6 LCR participants who received career coaching from the national organization providing the NCCP intervention, but none received any of the other three components of the NCCP model. Conversely, during the 1-year follow-up period, 31 NCCP participants sought help from non-NCCP employment programs, including 16 who received help from American Job Centers ($n = 3$), the state VR agency ($n = 5$), and/or VA vocational services ($n = 12$).

Employment Outcomes

As shown in Figure 2, the monthly employment rate continued to increase over the 12-month period for both groups. Except for months 4 and 8 when more NCCP participants than LCR participants were employed, the monthly employment rate did not differ between groups. Based on the multivariate analysis of the monthly employment rate, the time effect was significant, $t(2129) = 10.85$, $p < 0.001$, but the group and interaction effects were not. Nevertheless, as shown in Table 2, NCCP participants were more likely than LCR participants to become employed (90% *vs.* 78%). At the 12-month interview, the percentage of participants working full time (at least 30 hours/week) was similar for NCCP (67%) and LCR (66%), $\chi^2 = 0.03$, $p = 0.87$.

On average, NCCP participants earned more employment income each month than did LCR participants, a difference nearly reaching significance ($t = 1.95$, $p = 0.05$). All reported employment income for the 12-month period showed that NCCP participants averaged $6130 more in annual earnings than LCR participants, a significant difference.

TABLE 1. Background Characteristics

Characteristic	Total (N = 229)	NCCP (n = 115)	LCR (n = 114)	Test of Significance
Female, n (%)	44 (19.2%)	19 (16.5%)	25 (21.9%)	$\chi^2 = 1.01$, $p = 0.31$
Age, mean (SD)	30.3 (6.7)	30.0 (6.9)	30.6 (6.6)	$t = 0.61$, $p = 0.55$
Marital status, n (%)				$\chi^2 = 0.35$, $p = 0.55$ (married/cohabit versus other)
Married/cohabiting partner	131 (57.2%)	68 (59.1%)	63 (55.3%)	
Divorced/separated	39 (17.0%)	13 (11.3%)	26 (22.8%)	
Never married	59 (25.8%)	34 (29.6%)	25 (21.9%)	
Education, n (%)				$\chi^2 = 0.001$, $p = 0.98$
High school diploma/GED	34 (14.8%)	17 (14.8%)	17 (14.9%)	
Technical certificate and/or higher education	195 (85.2%)	98 (85.2%)	97 (85.1%)	
Race, n (%)				$\chi^2 = 0.22$, $p = 0.64$ (White versus other)
White	106 (46.3%)	55 (47.8%)	51 (44.7%)	
Black or African-American	83 (36.2%)	43 (37.4%)	40 (35.1%)	
Asian	15 (6.6%)	5 (4.3%)	10 (8.8%)	
American Indian or Alaskan	2 (0.9%)	1 (0.9%)	1 (0.9%)	
Hawaiian/Pacific Islander	4 (1.8%)	1 (0.9%)	3 (2.6%)	
Other	34 (14.9%)	15 (13.0%)	19 (16.7%)	
Hispanic, Latino, or Spanish ethnicity	44 (19.2%)	24 (20.9%)	20 (17.5%)	$\chi^2 = 0.45$, $p = 0.50$
Military branch, n (%)				$\chi^2 = 0.82$, $p = 0.37$ (Army versus other)
Army	144 (62.9%)	69 (60.0%)	75 (65.8%)	
Air Force	31 (13.5%)	18 (15.7%)	13 (11.4%)	
Navy	30 (13.1%)	17 (14.8%)	13 (11.4%)	
Marine Corp	20 (8.7%)	10 (8.7%)	10 (8.8%)	
Coast Guard	4 (1.7%)	1 (0.9%)	3 (2.6%)	
On active duty at baseline	60 (26.2%)	27 (23.5%)	33 (28.9%)	$\chi^2 = 0.89$, $p = 0.35$
Served in a combat zone, n (%)	108 (47.2%)	55 (47.8%)	53 (46.5%)	$\chi^2 = 0.19$, $p = 0.89$
Years military service, mean (SD)	8.6 (6.6)	8.5 (6.9)	8.7 (6.2)	$t = 0.06$, $p = 0.95$

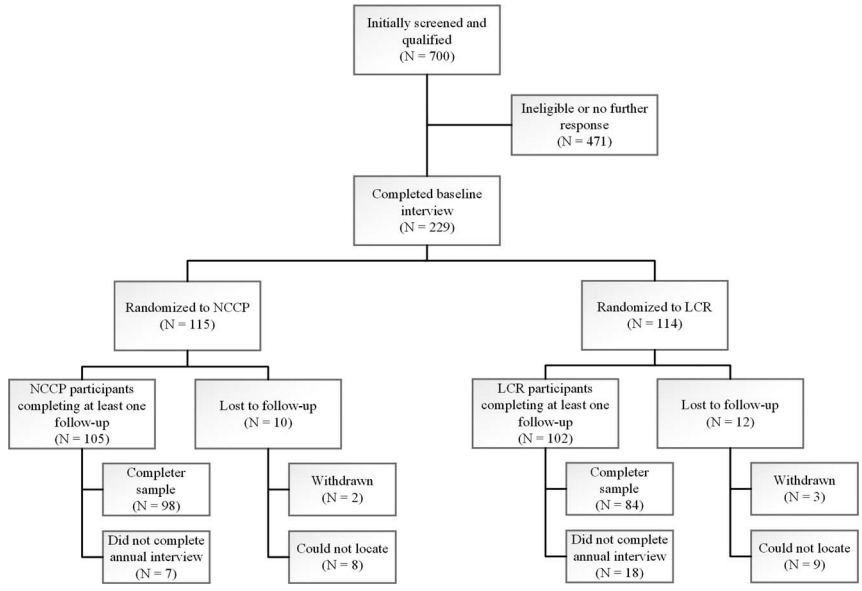

FIGURE 1. Consort diagram flow chart.

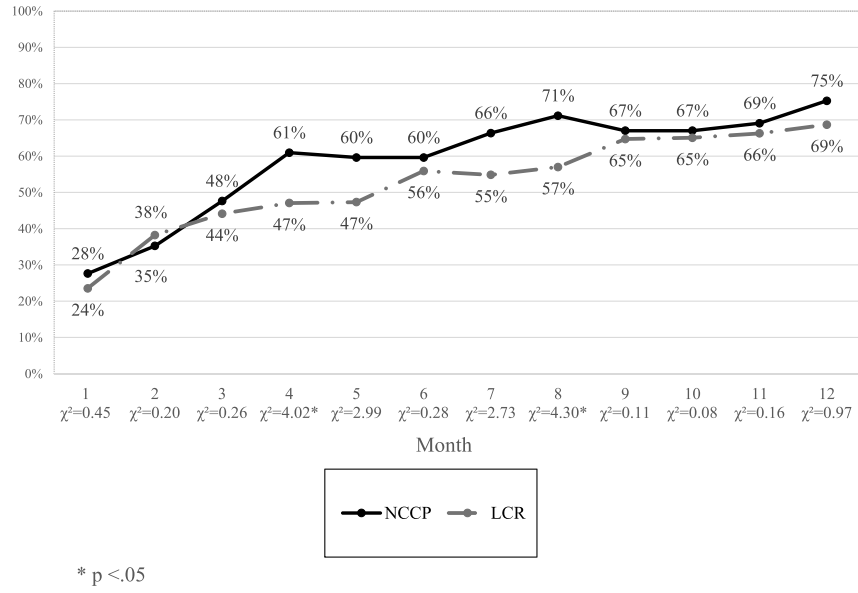

FIGURE 2. Monthly employment rates for Independence Project.

Among those who worked during the follow-up, the two groups were similar on all employment outcomes (days to start of first job, number of hours worked per week, job satisfaction, and job quality), although NCCP participants averaged an hourly wage of nearly $8 more than LCR participants. The effect sizes for the employment measures shown in Table 2 were small.

Education

As shown in Table 3, nearly two thirds of participants completing the 12-month interview reported attending an educational program, ranging from vocational certificate to graduate programs, during follow-up. The percentage attending educational programs was nearly identical in the two groups. Overall, 40% reported working and attending school at the same time, with no differences between the two groups.

Service-Connected Disability

A total of 181 (79.0%) participants reported their disability rating in at least one interview. Of these, 163 reported both their initial and 12-month disability ratings. Disability ratings for 90 NCCP participants increased from initial ratings (mean, 72.56; SD, 22.96) to 12-month ratings (mean, 77.11; SD, 21.37), $t = 3.95$, $p < 0.001$. Similarly, disability ratings for 73 LCR participants increased from initial ratings

TABLE 2. One-Year Employment Outcomes

	Total	NCCP	LCR		
	Mean (SD)	Mean (SD)	Mean (SD)	Test of Significance	*d* Effect Size
			Intent-to-Treat Sample (All Participants With a Follow-up Interview)		
	(*n* = 207)	**(*n* = 105)**	**(*n* = 102)**		
Worked in a paid job during follow-up	173 (83.6%)	94 (89.5%)	79 (77.5%)	$\chi^2 = 5.49$, $p = 0.02$	0.33
Percentage of months worked	47.6% (33.6)	51.6% (31.4)	43.5% (35.5)	$t = 1.73$, $p = 0.09$	0.24
Monthly earnings	$1904 (1907)	$2157 (1977)	$1644 (1804)	$t = 1.95$, $p = 0.05$	0.27
Total earnings	$21,648 (21504)	$24,668 (21907)	$18,538 (20729)	$t = 2.07$, $p = 0.04$	0.29
			Worker Sample		
	(*n* = 173)	**(*n* = 94)**	**(*n* = 79)**		
Monthly earnings	$2257 (1839)	$2371 (1884)	$2122 (1785)	$t = 0.89$, $p = 0.38$	0.14
No. days to start first job	90.1 (108.7)	83.9 (95.8)	97.5 (122.5)	$t = 0.82$, $p = 0.42$	0.12
Job tenure longest-held job, days	182.1 (97.1)	178.3 (93.9)	186.7 (101.1)	$t = 0.56$, $p = 0.58$	0.09
No. paid jobs	1.58 (0.81)	1.65 (0.88)	1.49 (0.71)	$t = 1.26$, $p = 0.21$	0.20
Highest hourly wage	$24.36 (19.81) (*n* = 168)	$27.96 (24.87) (*n* = 92)	$20.00 (9.44) (*n* = 76)	Mann-Whitney: $p = 0.43$	0.42
Hours worked/week in main job	37.9 (11.6) (*n* = 168)	38.5 (12.0) (*n* = 92)	37.2 (11.2) (*n* = 76)	$t = 0.72$, $p = 0.47$	0.11
Job satisfaction	3.16 (0.77) (*n* = 171)	3.17 (0.77) (*n* = 93)	3.16 (0.77) (*n* = 78)	$t = 0.08$, $p = 0.93$	0.01
Job quality	5.20 (0.95) (*n* = 122)	5.18 (1.07) (*n* = 69)	5.22 (0.78) (*n* = 53)	$t = 0.23$, $p = 0.82$	0.04

Job satisfaction (1 = very dissatisfied…4 = very satisfied).

Job quality (range: 1–7, lower scores = less job quality).

TABLE 3. Education Outcomes at 12 Months

	Total (n = 180)	NCCP (n = 96)	LCR (n = 84)	Test of Significance
Enrolled in an education program in past 12 mo	116 (64.4%)	62 (64.6%)	54 (64.3%)	$\chi^2(1) < 0.001$, $p = 0.97$
Worked while attending school	74 (41.1%)	37 (38.5%)	37 (44.0%)	$\chi^2(1) = 0.56$, $p = 0.45$
Type of educational program	**Total (n = 116)**	**NCCP (n = 62)**	**LCR (n = 54)**	
Vocational/trade school certificate	29 (25.0%)	13 (21.0%)	16 (29.6%)	
Associate degree	15 (12.9%)	13 (21.0%)	2 (3.7%)	
Bachelor degree	46 (39.7%)	21 (33.9%)	25 (46.3%)	
Graduate degree	12 (10.3%)	5 (8.1%)	7 (13.0%)	
Other	14 (12.1%)	10 (16.1%)	4 (7.4%)	
Milestones	**Total (n = 116)**	**NCCP (n = 62)**	**LCR (n = 54)**	
Received a degree	8 (4.9%)	3 (3.4%)	5 (6.7%)	
Completed a certificate program	21 (13.0%)	10 (11.5%)	11 (14.7%)	
Earned credits	60 (37.0%)	32 (36.8%)	28 (37.3%)	
Achieved other milestones	5 (3.1%)	2 (2.3%)	3 (4.0%)	
Modality of attendance	**Total (n = 116)**	**NCCP (n = 62)**	**LCR (n = 54)**	
In-person	42 (36.2%)	26 (41.9%)	16 (30.2%)	
Online	46 (39.7%)	22 (35.5%)	23 (43.4%)	
Hybrid	28 (24.1%)	14 (22.6%)	14 (26.4%)	

(mean, 73.01; SD, 22.28) to 12-month ratings (mean, 78.63; SD, 20.77), $t = 3.35$, $p < 0.01$. The mean change score did not differ between NCCP (mean, 4.56; SD, 10.93) and LCR (mean, 5.62; SD, 14.34), $t = 0.54$, ns. The correlations between employment outcomes and both 12-month disability ratings and the increase from initial to 12-month disability ratings were all small and nonsignificant (results not shown).

Changes in Health and Well-Being

The change from baseline to 12 months indicated significantly greater improvements in both physical and mental health for NCCP participants compared with those in LCR, as shown in Table 4. The effect sizes for these two comparisons were moderate and small, respectively. NCCP participants reported significant improvements in physical health, whereas LCR participants reported worsening of physical well-being. Both groups reported improved financial well-being.

Changes in Substance Use

The percentage of NCCP participants reporting tobacco use declined 10.4%, a significant reduction. The percentage using prescription opioids declined 19.8% in the NCCP group and 29.7% in the

TABLE 4. Change Between Baseline and 12 Months in Physical and Mental Health and Well-Being

	National Career Coach (n = 96)				LCR (n = 84)				Change Scores				
	Baseline	12 Mos			Baseline	12 Mos			NCCP	LCR			
	Mean (SD)	Mean (SD)	t	p	Mean (SD)	Mean (SD)	t	p	Mean (SD)	Mean (SD)	t	p	d
SWLS[a]	4.63 (1.42)	4.43 (1.63)	−1.39	0.17	4.53 (0.14)	4.54 (1.50)	0.030	0.98	0.20 (1.37)	−0.01 (1.45)	−0.95	0.34	0.15
VR-12[b] physical component (PCS)	39.57 (11.23)	41.57 (10.35)	2.11	0.04	41.99 (10.81)	38.39 (11.51)	−3.41	0.001	2.00 (9.32)	−3.60 (9.68)	3.96	<0.001	0.59
VR-12[b] mental component (MSC)	42.53 (13.66)	45.07 (13.7)	1.86	0.07	45.04 (14.52)	42.87 (15.52)	−1.63	0.11	2.54 (13.38)	−2.18 (12.25)	2.45	0.02	0.37
PHQ-9[c]	8.74 (6.58)	8.18 (5.67)	−1.07	0.29	8.08 (5.92)	8.68 (7.07)	−1.03	−0.31	−0.56 (5.15)	0.60 (5.31)	−1.48	0.14	0.22
InCharge Financial Distress/ Financial Wellbeing Scale[d]	5.73 (2.49)	6.52 (2.45)	3.34	0.001	5.15 (2.68)	5.87 (2.86)	2.58	0.01	0.79 (2.31)	0.72 (2.57)	0.18	0.86	0.03

[a]1 (low satisfaction) to 10 (high satisfaction).

[b]Higher scores indicate better health.

[c]Scores range from minimal (1–4) to severe (20–27).

[d]Scores range from high distress/low well-being (1.0) to low distress/high well-being (10.0).

LCR group, both significant reductions (for details, see Table B in Online Appendix, Supplemental Digital Content 1, http://links.lww.com/JNMD/A136).

DISCUSSION

In summary, the NCCP implemented a range of counseling and financial supports and successfully engaged transitioning military service members. Participants in this condition were highly satisfied with these services, much more so than were those assigned to receive LCR. Furthermore, NCCP participants benefitted from the multifaceted intervention by working more, earning more, and experiencing better health outcomes than those assigned to LCR. Despite good employment outcomes in both groups, however, participants continued to apply for and receive increases in disability ratings.

We interpret the outcomes as follows. First, despite their service-related disabilities and significant mental health symptoms, the study sample was a highly motivated group. Unlike evaluations of employment programs for people with serious mental illness, which typically show monthly employment rates to asymptote after a few months, with a substantial proportion of participants who discontinue seeking employment (Drake et al., 2013), the employment rates in the current study continued to climb for both groups over the 1 year follow-up period. The high proportions achieving employment and pursuing further education in both groups are remarkable. By comparison, a 2018 survey found that the employment rate for veterans with service-related disabilities was less than 40% (Erickson et al., 2021).

Second, despite the limits of a ceiling effect, the NCCP achieved better employment outcomes. Third, the lack of differences in service-connected disability outcomes suggests that gaining employment did not deter the veterans in either group from pursuing higher disability ratings. In fact, disability ratings increased over time in both groups over the same time most participants also were gaining employment. In this study, employment and service-connected disability were orthogonal outcomes; employment earnings correlated with neither disability ratings nor increases in disability ratings. These findings contrast with earlier studies that found a correlation between unemployment and disability ratings (Tsai and Rosenheck, 2016; US Bureau of Labor Statistics, 2020). We speculate that the study requirement that participants express the desire to work along with direct access to employment services may have been factors decreasing the association between disability rating and employment outcome.

Finally, and importantly, the NCCP had the secondary effect of improving health outcomes. These findings are somewhat surprising in that prior studies examining the direct impact of employment services on nonvocational outcomes have had mixed results (Frederick and VanderWeele, 2019). On the other hand, systematic reviews have found competitive employment to be associated with better health outcomes (Modini et al., 2016; Waddell and Burton, 2006). Taken together, the positive employment and health outcomes support policy changes to expand access to effective employment services for veterans, especially during the transition from military life.

A noteworthy feature of the NCCP is its reliance on remote coaching after initial face-to-face contact with veterans during a 4-day, in-person workshop. By contrast, a core component of many employment models is a vocational counselor who provides ongoing face-to-face contact. Exceptions include self-help strategies such as Web sites with online job search resources. Online resources may be sufficient for confident and experienced job seekers but are likely inadequate for many transitioning veterans with service-connected disabilities. Another component of the NCCP is the use of monetary incentives. This component is based on a common business practice; employers contending with labor shortages sometimes offer bonuses to retain workers. However, financial incentives generally have not increased labor market participation in European countries where such policies have been implemented (Brown and Koettl, 2012).

The main logistical challenge for designing an employment program for veterans recently separated from military service is their geographic dispersion. Most nongovernmental organizations lack the capacity to staff local offices nationwide. Accordingly, many veteran service organizations have been moving to a remote coaching model. As a practical matter, any national employment service must deliver ongoing support and coaching remotely, which some experts have assumed to be less effective than face-to-face contact. With the COVID pandemic forcing changes in the service delivery system, it may be time to reassess this assumption (Drake et al., 2021). The emergence of telemental health (Langarizadeh et al., 2017) with evidence for its effectiveness (Lazur et al., 2020) is further support for the provision of remote employment counseling, at least for some target groups, including veterans (Ottomanelli et al., 2021). One advantage of a national career coach compared with a local counselor is the coach's national perspective on job opportunities in specialized industries not available in the local community. Based on participant interviews, we learned that some veterans benefitted from a career coach who conducted a nationwide search for a civilian position requiring skills acquired working in a military specialty (e.g., intelligence analyst).

Because the NCCP is multicomponent, the design of the current study does not allow us to infer which of the four program components (in-person workshop, ongoing remote career counseling, human capital fund, and earning bonus) are essential for its success. Future analyses may clarify whether one or more components are most determinative of outcome.

One major limitation of this study is self-selection. Would the same findings apply to veterans who were in the civilian sector for longer, were less inclined to pursue education and employment, and may have experienced chronic problems related to unemployment, stress, and poor health? In addition, we do not know how participants made decisions about employment and education, if the employment findings will endure, and how the long-term course of health conditions will change. Another study limitation was that the control group was not assigned to an active intervention but was instead given referrals to three local community programs. Conversely, another major study confound was that some participants received help from employment programs beyond those to which they were assigned. Other limitations include the reliance on self-report and sample attrition. Finally, the large number of missing disability ratings is a further limitation; the analyses of these data should be viewed cautiously. We hope to explore these issues in further follow-up research on this sample.

CONCLUSIONS

Based on the results of this randomized controlled trial, we conclude that the NCCP is effective in increasing employment earnings and improving physical and mental health in veterans with significant service-connected disability ratings over a 1-year period. On the other hand, the NCCP seems to have no impact on increases in disability ratings. Although findings from this study are encouraging, replications should assess the generalizability and durability of these findings. Further work should also aim at identifying the critical program components essential for maximizing effectiveness.

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DISCLOSURES

Ross Dickman is an employee of the organization providing one of the employment interventions. The other authors declare no conflict of interest.

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