

Author Year; Country Score Research Design Total Sample Size	Methods	Outcome
<p>Ottomanelli et al. 2013 USA PEDro=5 RCT Level 2 N=157</p>	<p>Population: Veterans with SCI between the ages of 18 and 65 who received health care services in the SCI Centers at one of six participating Veterans Affairs Medical Centers. Experimental: n=81 (mean age 48.7) Control: n=76 (mean age 49.8). Treatment: Experimental group members received Supported Employment (SE) services by a vocational rehabilitation counsellor who was trained in the Individual Placement and Support Model, and integrated as provider among the SCI interdisciplinary care team in the SCI Center. Control groups: group members received Treatment as usual and received referrals to vocational rehabilitation services outside the SCI Centre. Data was collected for 12-months. Outcome measure: Competitive employment in the community (paying job earning at least minimum wage).</p>	<p>Employment: Among the 157 participants, 33 participants (21.0%) accounted for 88 total jobs.</p> <ol style="list-style-type: none"> 24 participants in the SE group accounted for 60/88 jobs (68.2%). The rate of employment for SE participants was significantly greater (29.6%) than the control (11.8%). SE participants accounted for 50 of 72 (69.4%) jobs (competitive employment) and were significantly more likely to achieve employment (25.9%) compared to control (10.5%). SE participants worked significantly more hours per week (22.0 vs. 17.0), averaged significantly fewer wages (\$233.9 vs. \$267.3), and missed fewer hours per week (0.3 vs. 1.8).
<p>Ottomanelli et al. 2012 USA PEDro=5 RCT Level 2 N=201</p>	<p>Population: 201 veterans with SCI (192M 9F) between the ages of 18 and 65 who received medical and/or rehabilitation care at 1 of 6 participating centers. Experimental: n=81 (mean age 48.7) Control: n=76 at intervention site (mean age 49.8); n=44 at observational site (mean age 45.1) Treatment: Experimental group members received a supported employment (SE) intervention based on an Individual Placement and Support (IPS) model. There were two control groups: one at the intervention sites through which individuals were randomly assigned to the control group – treatment as usual – intervention site (TAU-IS) and 1 at sites where the SE intervention was not available. All individuals at these observational sites received treatment as usual - TAU (TAU-OS). Data was collected for 12-months. Outcome measure: Competitive employment in the community (paying job earning at least minimum wage).</p>	<ol style="list-style-type: none"> Individuals in the SE group were 2.5 times more likely than individuals receiving TAU-IS and 11.4 times more likely than individuals receiving TAU-OS to obtain competitive employment. The rate of employment for SE participants was significantly greater than that of either the TAU-IS group or the TAU-OS group. Intent to treat analysis found that participants in the SE group earned significantly more per week than the TAU-OS group. Participants in the SE group earned significantly more per week than participants in both the TAU-IS and TAU-OS groups.
<p>Allen and Blascovich 1996 USA PEDro=6 RCT Level 1 N=48</p>	<p>Population: All individuals were classified as having severe ambulatory disabilities. Experimental: n=24 (SCI: n = 11, 7M 4F) Control n=24 (SCI= 11, 7M 4F) Treatment: Experimental group members received trained service dogs 1 month after the study began. Wait-list control group received dogs in month 13. Participants included individuals who had expressed interest in a service dog and who required substantial</p>	<ol style="list-style-type: none"> The experimental group had significant improvements on all psychosocial status tests at months 6 and 12 when compared to the control group. The experimental group had a significant decrease in hours of assistance needed at months 6 and 12 when compared to the control group.

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	<p>personal assistance. Data was collected for 2 years</p> <p>Outcome measure: Spheres of Control Scale (to assess internal locus of control), Rosenberg Self-esteem Scale, Affect Balance Scale (to assess psychological wellbeing), Community Integration Questionnaire, and data regarding the number of received paid and unpaid assistance.</p>	<ol style="list-style-type: none"> 3. After receiving a service dog, there were no significant differences between the groups at the same relative data points (months 0, 6 and 12 for the control group, months 12, 18 and 24 for the wait-list control groups). 4. After 12 months, the presence of the service dog was associated with a decrease of 68% of biweekly paid assistance hours. 5. After receiving a service dog, all participants reported substantial increases in terms of school attendance, part time employment, increased levels of social interaction and use of public transportation.
<p>Shem et al. 2011 USA Longitudinal Level 2 N=39</p>	<p>Population: 39 participants with SCI (28M 11F); age 16–26 years. Average(SD) age of mentees was 19.8(3.0) years. 17 employed mentors. In total, 29 participants were matched with mentors, and 10 participants (34%) completed the program</p> <p>Treatment: Each mentee with SCI was matched with a community-based mentor, with or without a disability. The mentoring relationship was planned for 2 years. Participants were evaluated with standardized questionnaires at intake, 3 months after entry, every 3 months thereafter, at the time of post-secondary education or employment entry and 4 months post entry.</p> <p>Outcome measures: return to school, return to work.</p>	<ol style="list-style-type: none"> 1. 7 (24%) participants returned to school; 2. 2 (6.9%) participants returned to work 3. 1 (3.4%) participant returned to school part-time. 4. For mentees who successfully completed the program, there was a trend for improvement in cognitive independence and occupation measures of Craig Handicap Assessment and Reporting Technique, and statistically significant improvements were found with Participation Index of the Mayo-Portland Adaptability Inventory-Version 4, Disability Rating Scale and Supervision Rating Scale, but not with the Satisfaction with Life Scale.
<p>Ottomanelli et al. 2015 USA Case-control Level 3 N=81</p>	<p>Population: 81 military veterans with SCI, average age (SD) 48.7 years (9.8), average time since injury (SD) 11.7 years (11.2), AIS Level of injury – A: 32.5%; B: 13.8%; C: 22.5%; D: 31.3%. Treatment: This study was part of a larger 3-year randomized control trial comparing EBSE to TAU provided for 12 months each to unemployed Veterans with SCI who were 18 to 65 years of age and receiving medical and/or rehabilitation health care services at 1 of 6 VHA SCI Centers. All participants received standardized evidence-based supported employment (EBSE) with activities including integrated vocational and medical rehabilitation treatment, rapid engagement in job finding, competitive employment, inclusion regardless of severity or type of disability, ongoing job support, and</p>	<ol style="list-style-type: none"> 1. Competitive employment (CE) rates during 1 year of evidence-based supported employment for persons with spinal cord injury (N = 81) was 25.9%. 2. There was a statistically significant difference observed between groups; participants obtaining CE were more likely to receive job development (26.6% vs 20.7%), job placement (1.3% vs 0.3%), and employment follow-up (8.4% vs. 2.2%) and less likely to receive vocational counseling (15.3% vs 28.4%).

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	<p>focus on participant preferences.</p> <p>Outcome measures: The IPS Fidelity Scale was used to measure the distribution of vocational services and time of those services delivered by vocational counselors. Mean time reflects average time per documented activity. Comparisons were made between groups that gained competitive employment (CE) and those that did not.</p>	
<p>Sinnott et al. 2014 USA Case series Level 4 N=1578</p>	<p>Population: 157 participants with SCI; average age = 48.7±9.8yo; time since injury 10.7±11.3y</p> <p>Treatment/Methods: A vocational rehabilitation program of Supported Employment (SE) for veterans with SCI; participants were randomly assigned to the intervention of SE (n=81) or treatment as usual TAU (n=76).</p> <p>Outcome measures: Costs and quality-adjusted life years were estimated from the Veterans Rand 36-Item Health Survey and extrapolated to Veterans Rand 6 Dimension utilities.</p>	<ol style="list-style-type: none"> 1. Average cost for the SE intervention was \$1,821. 2. In 1 year of follow-up, and compared with usual care, the SE group had marginally less total costs (\$6369) and produced fewer QALYs (n.s.), suggesting that SCI-VIP was not cost-effective compared with usual care. 3. An intensive program of SE for veterans with SCI was more effective in achieving competitive employment but was not cost effective after 1 year of follow-up. 4. Longer follow-up and a larger study sample will be necessary to determine whether SE yields benefits and is cost-effective in the long run for a population with SCI.
<p>Dorstyn et al. 2019 Australia Pre-post Level 4 N=5</p>	<p>Population: 5 people with SCI; mean age 46.4 +/-10.2yo; 4 females initially reviewed Work and SCI; Twenty-four with SCI/D subsequently enrolled, of whom 16 (mean age 46.4 years, SD = 11.1; 7 female), completed the intervention.</p> <p>Intervention: Intervention participants accessed the email-based information package (Work and SCI) over a 4-week period.</p> <p>Outcome Measures: My Vocational Situation Scale, Job Procurement Self-Efficacy Scale, Patient Health Questionnaire-9, and Life Orientation Test-Revised</p>	<ol style="list-style-type: none"> 1. Reliable change in pre-post scores across outcomes were reported by 38% (n = 6) of participants. 2. Favorable comments on the (Work and SCI) resource were provided in addition to suggestions for improvement. 3. Preliminary data suggest that (Work and SCI) may help to establish vocational interests among jobseekers with a SCI/D, however further work is needed to enhance participant compliance. 4. This might include moderator support to promote and maintain participation.
<p>Phillips et al. 2012 United States Case Series Level 4 N=111</p>	<p>Population: Newly injured individuals at an Atlanta rehabilitation. Mean(SD) age: 35(11.8) years; 78% male; 76% white.</p> <p>Treatment: Video-based telerehabilitation intervention (9 weeks); telephone-based telerehabilitation intervention (9 weeks); standard follow-up care.</p>	<ol style="list-style-type: none"> 1. Being in one of the intervention groups (either phone- or video-based telerehabilitation) trended towards a longer time to return to productive activities. 2. Being in one of the intervention groups did not have a significant

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	Outcome Measures: Time to productive activities (attending school, VR, working as a homemaker, volunteering) from injury. Time to employment from injury date among individuals employed prior to injury.	impact on the time to return to employment for individuals that were employed prior to injury.
King et al. 2004 USA Case series Level 4 N = 174	Population: 174 participants with SCI up to 12 months post-discharge from inpatient rehabilitation. No other demographics given. Treatment: An enhanced case management program (Marcus Community Bridge Program) assisting people to return to the community and to return to work or educational training. Outcome measure: Rate of return to work or educational training at 1-year post-discharge.	<ol style="list-style-type: none"> 1. One year after discharge the rate of return to work was 17% (i.e. identical to the rate reported by the U.S. Model Systems) and the rate of return to educational training was 31.6% (compared to 15.3% reported by U.S. Model Systems)
O'Neill et al. 2017 USA Prospective Study (without controls) (Conference Abstract) Level 4 N=54	Population: 54 participants; 75% males 25% females; mean age = 37±13yo; level of injury 37% tetraplegia, 30% paraplegia, 33% non-traumatic SCI Intervention: The intervention consisted of a vocational resource facilitator (VRF) being the single point of contact providing medical/vocational case coordination to inpatients and outpatients to ensure the continuity of vocational rehabilitation services upon discharge and long-term follow-up in the community. Outcome Measures: interest in pursuing employment, return to work	<ol style="list-style-type: none"> 1. At time of discharge, 48% of participants remained interested in pursuing employment. 2. 81% of these outpatient individuals were referred for state vocational rehabilitation services, with 17 actively engaged in the vocational rehabilitation process. 3. Almost half of all eligible inpatients remained actively engaged in pursuing employment after discharge with some returning to work immediately and others actively working with the state vocational rehabilitation agency to secure competitive employment. 4. 23% outpatient individuals returned to work: 15% to same employer-same job and 8% to same employer-different/modified job. 5. None who returned to work received state sponsored vocational rehabilitation services; although two were referred for services, but were denied due to income restrictions. 6. Preliminary findings indicate considerable interest in employment among newly injured persons with SCI.
Rowell and Connelly, 2010 Australia Observational Level 5 N=181 (SCI n=109)	Population: 181 respondents; 73.5% male; mean age: 44 years; 61% unmarried; mean time since injury: 18 years; 39% in labour force and 26% employed. Treatment: no treatment per se but examines the impact of a publicly funded set of services to enable return to work i.e. Adult Lifestyle Support Packages e.g. support with activities of daily living	<ol style="list-style-type: none"> 1. No statistically significant effect of either the ALSP or support packages from private insurance sources (i.e. PPSP) on labour market participation was found. 2. A number of other factors are significantly correlated with labour market participation:

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	<p>Spinal Injuries Survey Instrument (SISI) developed and administered, Short Form-36 (SF-36) and modified SF-36 administered.</p> <p>Outcome Measures: Labour market outcomes, exposure to the Adult Lifestyle Support Packages (ALSP), clinical and demographic covariates</p>	<ol style="list-style-type: none"> 3. individuals who undertook education or training post-SCI were more likely to be labour market participants 4. females were less likely to be labour market participants 5. a positive attributional style is associated with a higher likelihood of labour market participation 6. a weak non-linear age effect was detected, which suggests that the probability of labour market participation is decreasing in age 7. The marginal effects for the ALSP are statistically insignificant. Thus, the hypothesis that the ALSP has a zero effect on labour market participation cannot be rejected. 8. The strongest marginal effect is for post-SCI education, which is statistically significant at the 1% level and for which the 95% confidence interval is 0.108–0.503. This suggests that post-SCI training and education has an important effect on labour market participation. The probability of labour market participation is increasing in the ln (Attributional Style index, positive scenario). The higher the individual's propensity to "internalize" positive employment outcomes to his/her own attributes (or "capabilities and functionings"), the more likely he/she is to be a labour market participant.
<p>Hansen, 2007 India Observational Level 5 N= 46</p>	<p>Population: 46 participants with SCI (40M 6F). No other demographics given.</p> <p>Treatment: Participation in the work rehabilitation program with the Center for Rehabilitation of the Paralyzed. Program includes physical conditional, vocational training and work placements.</p> <p>Outcome measure: Vocational status.</p>	<ol style="list-style-type: none"> 1. 23 individuals returned to work: 18 participants were employed in a job similar to their pre-injury job; 5 were employed in a different occupation than what they were doing pre-injury. 2. Of the 23 individuals that returned to work 4 used a wheelchair, and 5 used crutches.
<p>Jongbloed et al. 2007 Canada Observational Level 5 N=357</p>	<p>Population: 357 participants with SCI (243M 114F); 92 with complete tetraplegia, 142 with complete paraplegia, 108 with incomplete SCI, 15 unknown; mean age = 46.</p> <p>Treatment: Report on access to vocational counselling and job retraining.</p> <p>Outcome measure: Mailed questionnaire inquiring about factors influencing employment.</p>	<ol style="list-style-type: none"> 1. Social, economic and political environmental factors contribute to individuals working less than desired. Personal reasons were the most influential. 2. Vocational counselling and job retraining were the most important factors in obtaining employment. Other factors were access issues, attendant care, willing employers, personal presentation and the chance

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		<p>to prove oneself.</p> <p>3. The impact of policies of government and third party payers were cited as having both positive and negative effects on reemployment.</p>
<p>Jang et al. 2005 Taiwan Observational Level 5 N=169</p>	<p>Population: 169 participants (147M 22F); 32 participants with incomplete paraplegia, 86 with complete paraplegia, 24 with incomplete tetraplegia, 27 with complete tetraplegia; mean age = 39. Treatment: Report on access to vocational training. Outcome measure: Employment status, vocational training</p>	<ol style="list-style-type: none"> 1. 88% were gainfully employed at time of injury; post-injury 79% were employed full time, 21% part-time, 53% were unemployed, 5% attended school or vocational training 2. 50% of those employed received vocational training compared to only 28% of unemployed. 3. Predictive factors of return to work include greater duration post-injury, higher level of education, being married, independence in use of public and private transportation, higher Barthel Index score, age at injury <25 years, and receiving vocational training after injury.
<p>Wang et al. 2002 Taiwan Observational Level 5 N=91</p>	<p>Population: 36 participants with SCI (29M 7F); 13 participants with tetraplegia, 23 with paraplegia; from the Asylum Center Spinal Cord Injury (ACSCI); age range: 18-49; 11 complete, 25 incomplete. 55 participants with SCI (47M 8F); 21 with tetraplegia, 34 with paraplegia; from the Spinal Cord Injury Association of the Republic of China (SCIAROC); age range 18 - >60; 16 complete, 39 incomplete. Treatment: ACSCI group: training program with 6 months of training including: psychosocial consulting, functional, strengthening exercises, endurance, and vocational training; SCIAROC: no specific training program. Outcome measure: Employment status, self-reported Functional Independence Measure (SRFIM).</p>	<ol style="list-style-type: none"> 1. All participants in the SCIAROC group had no ACSCI training. All participants with tetraplegia were unemployed; 1 subject with paraplegia was a student, 11 were employed, and 22 were unemployed. 2. Employment rates in the SCIAROC group were related to the level of functional independence and injury level. 3. ACSCI group: all 36 participants were unemployed because they were just completing the ACSCI program. 4. Individuals with tetraplegia in the ACSCI group showed significantly better functional independence than those in the SCIAROC group.
<p>Cotner et al. 2018 USA Qualitative N=82</p>	<p>Population: 82 service providers in the VA gave 130 interviews over the course of the 24 month vocational program. Intervention: Individual placement and Support (IPS). Outcome Measures: Interviews were conducted every 6 months at each site by two or three qualitative researchers using an open-</p>	<ol style="list-style-type: none"> 1. Twelve barriers to IPS implementation were identified including: obtaining resources, caseload size and area, veteran-specific factors (e.g., low motivation, fear, lack of transportation, etc.), provider education, hiring, provider turnover and integration of vocational rehab counselors (VRs) into the SCI clinical care team, time management, and lack of leadership/salesperson type.

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	<p>ended, semi-structured interview guide. Interviews were conducted to determine barriers and facilitators to employment and implementation of the IPS program.</p>	<ol style="list-style-type: none"> 2. Facilitators included: integration of vocational and clinical team, engagement of SCI providers, fit of IPS model, audit and feedback, and obtaining resources. 3. Some of the named barriers and facilitators were the same, indicating that they could be key components to a program going well or going poorly, or that different parts of implementation were required at different times.
<p>Note: A 2012 study by Kolakowsky-Hayner et al. was excluded based on the fact that individuals with SCI only constituted 29.8% of the sample population, and there was no specific analysis or coefficients that would enable understanding of the SCI specific subsample. The SCIRE criteria states that over 50% of the sample must be individuals with SCI for inclusion if a subgroup analysis is not performed.</p>		