




Factors influencing employment among people with spinal cord injury in South Africa

Lucian Bezuidenhout^{a,b} , Anthea Rhoda^a, David Moulæe Conradsson^{b,c,d} , Francois Theron^e and Conran Joseph^d 

^aFaculty of Community and Health Sciences, University of Western Cape, Cape Town, South Africa; ^bDepartment of Neurobiology, Care Sciences and Society, Division of Physiotherapy, Karolinska Institutet, Stockholm, Sweden; ^cMedical unit Occupational therapy & Physiotherapy, Theme Women's Health and Allied Health Professional, Karolinska University Hospital, Stockholm, Sweden; ^dDepartment of Health and Rehabilitation Sciences, Division of Physiotherapy, Stellenbosch University, Cape Town, South Africa; ^eMeulmed Rehabilitation Centre, Pretoria, South Africa

ABSTRACT

Purpose: The unemployment rate post spinal cord injury (SCI) in South Africa is high with limited knowledge of environmental factors outside the health services, especially in an unevenly developed resource setting like South Africa, affecting the employment rate in people with SCI. Our purpose was to investigate factors associated with employment in people with SCI in South Africa.

Methods: Two hundred persons with SCI participated in a cross-sectional survey design. This study formed part of the International Spinal Cord Injury Community Survey. Subsections of the questionnaire responses were used as explanatory variables to predict employment after SCI using logistic regression analysis.

Results: The response rate of the study was 54%. Of the 200 participants included, 61% reported being employed before SCI onset whereas only 25% reported being engaged in paid work at the time of this study. The logistic regression model showed not requiring physical assistance in the home environment ($p = 0.016$), the number of education years before SCI ($p = 0.007$), household income ($p < 0.001$), having worked before SCI onset ($p = 0.041$), and environmental factors ($p = 0.029$) to be factors associated with employment after SCI.

Conclusion: The finding suggests multiple factors influence the employment rate, advocating for interdisciplinary rehabilitation approaches and social development interventions to address meaningful occupations in persons with SCI in South Africa.

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► IMPLICATIONS FOR REHABILITATION

- Rehabilitation programs should be adapted and tailored to enhance physical independence.
- Public policies regarding environmental factors such as access to reliable transport, assistive devices, and public places for wheelchair users are important and could potentially support individuals with spinal cord injury (SCI) becoming employed/re-employed.
- For successful social/community/civic reintegration for individuals with SCI an intersectional collaboration (i.e., between policymakers, health professionals, and the labor market) needs to be considered to improve the employment opportunities post-SCI.

Introduction

Spinal cord injury (SCI) is one of the most severe types of traumatic or non-traumatic injury with long-lasting negative impacts on health status, functioning, and participation (e.g., employment and community participation) [1,2]. Although the management of SCI in South Africa has developed significantly, still only 2 of the 9 provinces in South Africa have the organizational capacity and resources to provide comprehensive care for people with SCI [3]. Moreover, while private health insurance does provide effective services for people with SCI, this is mainly for a select few (i.e., individuals with good economic statuses) with the majority (84%)

of South Africans relying on an already strained public-funded healthcare system [4]. One important goal of post-SCI rehabilitation, following initial rehabilitation aimed at improving neurological and functional recovery as well as adjustment to the injury, is to return to and sustain employment [5,6]. Employment is considered a significant indicator of successful social/community/civic reintegration [7,8]. Moreover, employment status or being involved in work activities are also associated with various positive benefits such as self-care, economic sustainability, satisfaction with life, and prolonged life [2,5,9], with studies reporting that those with SCI who are employed having a perceived improvement on their quality of life compared to those who are

CONTACT Lucian Bezuidenhout  lucian.bezuidenhout@ki.se  Division of Physiotherapy, Department of Neurobiology, Care Sciences and Society, Karolinska Institutet, 141 83 Huddinge, Alfred Nobels Allé 23, 23 100, Huddinge, Sweden

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unemployed [2,6,10]. While the South African government's employment equity act recommends that at least 2 percent of all employees in companies should be people with disability [11], still unemployment is one of the major challenges affecting people with disability in South Africa. People with disability are often subjected to environmental factors such as discriminatory attitudes, inadequate access and work environments, and ineffective labor legislation [12]. Although reported to be high, the employment rates among people with disability in South Africa is not well documented. Moreover, the factors related to unemployment among these individuals are not well understood.

The average age of SCI in developed and non-developed countries ranges from 14 to 67 and 29 to 46 years, respectively [13], and often corresponds to the time of fundamental career development and establishment, especially in non-developed countries [2]. The employment rate amongst people with SCI varies across the world, ranging on average between 34 to 37% [7,14], with low-income countries like Morocco (10%) and Brazil (14%) having one of the lowest employment rates post SCI compared to high-income countries like Australia (42%) and countries within Europe (51%) [7,14]. Previous studies [5,6,15,16] have shown factors such as level of education prior to SCI onset, age, race, gender, pre-SCI employment status, functional dependence, and injury severity to be factors associated with return to work. For example in a study that included 1134 individuals with SCI in the United States, Krause et al. [6] concluded that having higher education, less severe injury, and returning to the same pre-injury work be associated with a shorter interval of starting a job post-SCI [6]. In a study related to investigating factors associated with paid work status in Brazil, Oliveira et al. [5] concluded that fewer complications at the time of the injury, returning to study and a good ability to perform work increased the likelihood of being engaged in paid work [5].

South Africa can be described as a low resource setting with uneven resources, high levels of poverty and unemployment, where health inequalities are documented to be pronounced with widespread inconsistencies and systematic differences [17]. Although previous studies [5,6,15,16] highlight essential factors associated with employment among people with SCI, few studies have investigated environmental factors outside the health services (e.g., public and home access, social attitudes, and transportation), especially in an unevenly developed resource setting like South Africa. For example, in a general disability study, Sirvastava and Chamberlain [18] reported that employers' attitudes towards their disabled employees, transport problems, and inability to access buildings are some of the most important factors preventing people with disability to retain employment [18]. In relation to this, Jang et al. [19] reported that individuals with SCI which have the ability to use public or private transportation independently had a higher chance of returning to work [19].

South Africa has one of the highest incidences of SCI globally, with most persons with SCI relying on public-funded health care services [20]. The public healthcare system in South Africa has often been documented to have a lack of adequate healthcare facilities and insufficient human and financial resources [21], which ultimately translates to inadequate rehabilitation services for people with disabilities. Moreover, inaccessible environments have been identified as the major barrier to social participation and integration for people with SCI [22]. Although legislation to improve employment opportunities for people with disability has been developed by state departments and provincial and local authorities, challenges regarding the accessibility of the built environment and transport remain with no SCI-specific

employment legislation in place [3]. Due to the longstanding nature of an SCI as well as considering the interface between initial institutional care, including rehabilitation, and discharge back home and into the wider community, health systems should therefore be geared towards providing long-term physical and psychological rehabilitation to help guide adjustment, assist with overcoming physical, social and attitudinal challenges, and empowering clients with problem-solving skills when entering a previously known environment in a "new" body.

The unemployment rate in South Africa is one of the highest globally, especially among younger adults [23]. The compounding factor of being unemployed and having a disability can be detrimental to social and mental well-being, with the type of disability influencing prospective employment and level of income. Apart from the need for long-term rehabilitation, identifying factors influencing employment post-SCI could help guide more vocational interventions and targets that could increase employment status and therefore decrease the cost of rehabilitation in an already burdened healthcare system in South Africa. While there are known predictive factors influencing employment status among people with SCI, it is often published for highly developed countries and cannot directly be translated to unevenly developed resource settings like South Africa due to socio-economic and healthcare services provision differences. It is also worth noting that there is a limited database for individuals with SCI across South Africa, therefore this study will serve exploratively and contribute to the knowledge gap. Therefore, this study aims to describe employment characteristics after SCI in South Africa and to investigate factors (physical functioning and environmental) associated with employment status in people with SCI in South Africa.

Materials and methods

Study participants

Two hundred participants with traumatic and non-traumatic SCI who were ≥ 18 years of age and living in the community participated in the International Spinal Cord Injury (InSCI) community survey [7]. Participants were recruited from private (44 participants) and public (156 participants) registries in the Gauteng and Western Cape provinces of South Africa, respectively. Exclusion criteria included those with lower motor neuron paralysis, pronounced cognitive deficit, hospitalization at the time of the survey, and the inability to give written consent during face-to-face interview administration of the survey or recorded verbal consent during telephonic interviews and follow instructions. The community survey was developed by the InSCI scientific committee and the process was coordinated by Swiss Paraplegia. The survey was conducted in 22 countries, representing all World Health Organization regions, between January 2017 and May 2019 [7]. The InSCI protocol and WHO region level results are published elsewhere [7,24,25]. The South African section of this study was approved by the Biomedical Research Ethics Committee of the University of Western Cape (BM16/3/24) and all participants gave written informed consent prior to participation.

Data collection

The design and development of the InSCI survey content are described elsewhere [24,25]. Briefly, most SCI participants participated in one interview session (either in person or *via* telephone) which consisted of 125 self-/interview-administered questions. Six participants, especially those completing the survey over the

telephone, requested the interview over two sessions. This study used subsections of the survey questionnaire responses as explanatory variables to predict employment status post-SCI.

Concerning the outcome variable, employment status was defined as “at least one hour of paid work per week” [7,26] and was assessed through a list of employment options (e.g., work for an employer, self-employed, student and unemployed) in the questionnaire [7,27]. The collection of sociodemographic data included gender, age, disability pension and education level. Years of education before and after SCI were measured in accordance with the International Standard Classification of Education and included total years of formal education before and after SCI onset, school and vocational training. Injury-related variables included age and time since injury, etiology, impairment level and severity. Impairment level was categorized as paraplegia or tetraplegia, with the severity of the impairment categorized as motor complete or motor incomplete SCI. In addition, health-related problems due to SCI were collected using the SCI-Secondary Health Conditions scale [28] and the self-administered comorbidity questionnaire [29]. Emotional health (i.e., depression) was measured using a sub-domain of the short form health survey (SF-36). The subjective social status was measured using the MacArthur scale of subjective social status, a graphical illustration that uses a symbolic ladder to describe the level of social status [30]. Satisfaction with healthcare (1 = very satisfied to 5 = very dissatisfied) and household income was measured using the World Health Organization model disability survey. Subjective selfcare scores included a sum score (0–20) of the ability to eat and drink, wash your upper body, lower body and head, dress your upper and lower body and grooming, as derived from the Spinal Cord Independence Measure – Self Report [31]. Additionally, bladder and bowel management were also categorized using the Spinal Cord Independence Measure–Self Report [31]. Mobility was rated as the ability to move around moderate distance (10–100 m), with the lowest score indicating the need for total assistance and the highest score indicating mobility without any walking aids [31]. Environmental factors consisted of features associated with the support and relationships from others (e.g., family, friends and colleagues), social attitudes (e.g., negative attitude towards people with disability), public services (e.g., availability of short and long-distance transportation) and policies and were measured as a sum score using the Notwill Environmental Factors Inventory Short Form [24,32].

Statistical analysis/data analysis

Statistical analyses were carried out using IBM SPSS v.26 software. Descriptive statistics were used to present demographics and to compare SCI patients who were employed after SCI and those who were unemployed after SCI using the independent t-test, Mann-Whitney U test and Chi-square test. For factors associated with employment after SCI, the predictive variables were first used as univariate inputs to the logistic regression model. If the univariate were significant (i.e., p -value ≤ 0.2), it was included in the final multivariate logistic model. The final logistic model included the requirement of physical assistance (yes/no), number of education years before and after SCI, subjective social status (1 = low social status to 10 = high social status), household income (1 = less than ZAR 1100 to 10 = greater than ZAR 500000 per month), depression (1 = all the time to 5 = none of the time), whether they had a job before the SCI (yes/no), rating of health (1 = excellent to 5 = poor), subjective selfcare scores (0 = need total assistance to 20 = completely independent), bladder and

bowel management (0 = bad management to 13 = good management) and environmental factors (0 = no influence to 28 = made my life a lot harder) being used as exploratory covariates. Most of the predictive variables were chosen based on previous research identifying them as key predictors [2,5,26] and factors perceived to be key variables, in the South African context, of employment after SCI. It is worth noting that this study was exploratory in nature, especially considering the complexity of employment for people with SCI in unevenly distributed settings like South Africa. However, the selected variables were guided by the domains included in Krause et al. [33] theoretical risk model for complex outcomes post-SCI, as well as considering environmental factors which play a key role in influencing employment [33].

Results

Participant characteristics

Two hundred persons with traumatic and non-traumatic SCI participated in this study. Table 1 presents the socio-demographic and SCI-related information. Most of the SCI participants were male (75%), single (78%), and around half had complete SCI injury. The majority of the participants also reported experiencing a traumatic SCI of nature, with the prominent causes related to assault and road accidents. The mean age at SCI onset was 28 years (SD: 11) and most SCI individuals were paraplegic (61%). The majority (82%) of the participants reported having secondary education (i.e., high school level) with approximately 10% having either a short tertiary or university education. Of the 200 participants, a majority (61%) reported being employed before SCI with occupations including the educational, information technology, construction and general services sectors.

Employment characteristics

At the time of this study, 49 (24.5%) of the 200 participants reported having work according to the definition used in this study. The average years to start working post-SCI was 2.6 years, ranging between 1–22 years, and of those who worked, 59%

Table 1. Demographics of participant with spinal cord injury.

Characteristics ($n = 200$)	
Male sex, n (%)	150 (75)
Age (years), mean (SD) ^a	28 (11)
Marital status, n (%) ^b	
Single	155 (78)
Married/cohabiting	44 (22)
Employment status before SCI, n (%)	
Working	121 (61)
Not working	79 (39)
Employment status after SCI, n (%)	
Working	49 (25)
Not working	151 (75)
Level of impairment, n (%) ^c	
Paraplegic	119 (61)
Tetraplegic	77 (39)
Severity of impairment, n (%) ^c	
Complete	102 (52)
Incomplete	94 (48)
Level of education, n (%)	
Primary	17 (8.5)
Secondary	164 (82)
Short tertiary	10 (5)
Further education	9 (4.5)

^anot equal to 200 ($N = 189$), ^bnot equal to 200 ($N = 199$), ^cnot equal to 200 ($N = 196$).

reported receiving vocational services. There was no significant difference in age, sex and severity of impairment between individuals who had paid work and those who did not have paid work after SCI (Table 2). In contrast, there was a significant difference in the education years before and after SCI onset. Additionally, 88% of the participants who were not working at the time of this study reported receiving a disability pension compared to 39% who were engaged in paid work after SCI. Of the 49 participants engaged in paid work, 86% reported having been employed before SCI onset with 43% reporting returning to the same occupation, with a mean time for a return to work of 18 months compared to 38 months for those who returned to a different occupation after SCI.

Logistic regression

The final logistic regression model included 11 variables (Table 3), with physical assistance (odds ratio (OR) = 5.73; $p = .016$), the number of education years before SCI (OR = 1.22; $p = .007$), household income (OR = 0.10; $p = <.001$), having a work before SCI (OR = 0.23; $p = .041$), and environmental factors (OR = 0.86; $p = .029$) being significant predictors to paid work post-SCI. The combination of the variables resulted in an 86.3% prediction

Table 2. Comparison between individuals with SCI who are working and those who are not working.

Characteristics	Employed (<i>N</i> = 49)	Unemployed (<i>N</i> = 151)	<i>p</i> Value
Male sex, <i>n</i> (%)	35 (71)	115 (76)	0.844
Age (years), mean (SD) ^a	28.2 (11.6)	31.7 (14.1)	0.937
Marital status, <i>n</i> (%) ^b			
Single	27 (56)	128 (85)	0.575
Married/cohabiting	21 (44)	23 (15)	
Vocational services, <i>n</i> (%)	29 (59)	83 (55)	0.970
Level of impairment, <i>n</i> (%) [*]			
Paraplegic	30 (61)	89 (59)	0.382
Tetraplegic	19 (39)	58 (39)	
Severity of impairment, <i>n</i> (%) [*]			
Complete	29 (59)	76 (51)	0.558
Incomplete	20 (41)	74 (49)	
Education years before SCI, mean (SD)	13.1 (4.7)	11.6 (4.1)	<0.001
Education years after SCI, mean (SD)	2.1 (2.7)	0.6 (1.1)	0.002
Physical assistance, <i>n</i> (%)	24 (49)	125 (83)	0.523
Disability Pension	19 (39)	133 (88)	0.113
Job before SCI, <i>n</i> (%)	42 (86)	78 (52)	0.543

Table 3. Univariate and multivariate logistic regression models for variables predicting paid work after SCI.

Variables	Exploratory univariate logistic regression model				Final multivariate logistic regression model			
	B	S.E	OR (95% CI)	<i>p</i> Value	B	S.E	OR (95%CI)	<i>p</i> Value
Male sex	-0.25	0.37	0.78 (0.38–1.61)	.507				
Age	-0.00	0.02	0.99 (0.97–1.03)	.819				
Education years before SCI	0.14	0.05	1.15 (1.05–1.26)	.002	0.20	0.07	1.22 (1.06–1.40)	0.007
Education years after SCI	0.11	0.07	1.12 (0.98–1.27)	0.09	0.11	0.88	1.12 (0.94–1.32)	0.207
Vocational services	-0.16	0.33	0.85 (0.44–1.64)	.634				
Level of impairment	0.03	0.34	1.03 (0.53–2.00)	.933				
Pain intensity	0.14	0.38	1.15 (0.55–2.42)	.714				
Depression	-1.68	0.75	0.19 (0.04–0.82)	.026	0.37	1.02	1.44 (0.20–10.70)	0.719
Subjective social status	-0.92	0.34	0.40 (0.20–0.78)	.007	-0.95	0.64	0.39 (0.11–1.36)	.139
Satisfaction with healthcare	0.45	0.37	1.57 (0.77–3.22)	.215				
Household income	-2.91	0.41	0.06 (0.03–0.12)	<.001	-2.34	0.67	0.10 (0.03–0.36)	<0.001
Physical assistance	1.61	0.36	5.01 (2.48–10.10)	<.001	1.75	0.73	5.73 (1.39–23.66)	0.016
Subjective selfcare score	0.10	0.03	1.11 (1.05–1.17)	<.001	0.20	0.07	1.02 (0.89–1.16)	0.802
Bladder and Bowel management	0.14	0.05	1.15 (1.04–1.26)	.006	-0.05	0.14	0.95 (0.72–1.26)	0.710
Environmental factors	-0.18	0.04	0.84 (0.77–0.90)	<.001	-0.15	0.07	0.86 (0.75–0.99)	0.029
Employed before SCI	-1.71	0.44	0.18 (0–0.8–0.43)	<.001	-1.48	0.73	0.23 (0.06–0.94)	0.041
Rating of Health	-0.89	0.45	0.41 (0.17–0.99)	.046	-0.24	0.74	0.98 (0.23–4.18)	0.974

B: Beta; S.E: Standard error; OR: odds ratio; CI: Confidence intervals.

accuracy and explained 66% of the total variance of work status post-SCI.

Discussion

This study aimed to describe the employment characteristics and identify factors associated with employment status in people with SCI in South Africa. The results showed a low employment status (24.5%) for individuals with SCI with the logistic regression model showing not requiring physical assistance, the number of years of education prior to SCI, work before SCI onset, higher household income, and environmental factors to be factors associated with employment after SCI.

Post et al. [7] reported an average global employment rate for individuals with SCI of 38% with a large variation (10.3–61.4%) in employment rates between different countries [7]. While this study's employment rate is much lower, it is comparable with Hess et al. [2] and Oliveira et al. [5]. The variation in post-SCI employment rates around the world could be indicative of the definition of work, various socio-economic influencing conditions, sample sizes, SCI characteristics, labor market policies and regulatory frameworks in support of employment of persons with disabilities in the individual countries' [5,7,34]. The unemployment rate for SCI in South Africa is among the highest in the world, which could be due to those typically at risk of traumatic SCI having lower levels of education prior to injury as well as engaging in health risk behaviors more often. Furthermore, a significant employment gap exists between the general (34.9%) and the SCI population in South Africa, which further deepens inequality. In addition to Morwane et al. [35], to our knowledge, this is one of the few studies to present the employment rate amongst people with disability in South Africa. According to a census report released by Statistics South Africa, it is estimated that 8 out of 10 persons living with disability are unemployed [36], this appears in alignment with the employment rate in this study of 24.5%. This highlights the employment challenges that individuals with SCI face in unevenly developed resource settings.

Previous studies have shown that individuals with more education years before SCI onset have a higher possibility of attaining work and returning to work much faster post-SCI [5,6,37]. Generally, individuals with more education years have stable employment [38] and therefore, it could be easier and quicker to return to the same pre-SCI occupation and employer. Moreover,

this association could also be indicative of the availability of work that requires years of education and a lower impact on physical disabilities (i.e., manual labor jobs) in these types of work [37,39,40]. Our results are in line with these findings, with increased years of pre-SCI education and being employed before SCI being a significant predictor of being employed post-SCI. This could also be indicative of individuals with higher education levels having more motivation, autonomy and positive personal expectations [37]. Additionally, individuals with more education years and who return to the same occupation have a shorter mean time (18 months) compared to those who had to return to a different company and occupation (38 months). Often returning to a different occupation would also take longer since the individuals would need to learn new information and skills [41]. Although there was a significant difference ($p = .002$) in the number of post-SCI education years (2.1 years) for those who were employed compared to those who were unemployed (0.6 years), education years after SCI was not a significant predictor of employment post-SCI. This could be attributed to the vocational programs being ineffective (i.e., vocational services not directed to obtaining specific skills for a prospective job) since there are no standards on which vocational rehabilitation programs should be included or which vocational services are effective for individuals with SCI [42]. It is worth noting that the National Rehabilitation Policy of South Africa embraces the protection of employment of persons with disabilities and that vocational rehabilitation is a top rehabilitation priority. The negative association between education years post-SCI and employment post-SCI could also be due to the lack of communication between the rehabilitation service providers, regarding which vocational skills are needed, and the labor market.

Household income was among the strongest predictors for return-to-work post-SCI. Socio-economic factors have been documented to play an essential role in health outcomes with some studies showing a positive relationship between income and subjective well-being [43]. In addition to this SCI often causes financial hardship to families, especially to those who were financially dependent on the individual with SCI [44]. More importantly, individuals with SCI generally require access to finances/recourses to provide support (i.e., healthcare cost, modification of houses and vehicles and equipment) for basic life adjustment after SCI onset [43]. These factors could explain the influence of household income on return to work, with individuals living in a household with a higher income having an overall better opportunity to return to work and contribute to household income. It is worth noting that the South African government does provide disability pension to assist individuals with SCI, especially during the rehabilitation period. To be able to qualify for a disability grant individuals must be between 18–59 years old, be medically examined by a state-appointed doctor, not earn more than ZAR 86 280 per annum, and not have assets worth more than ZAR 1 227 600. The maximum disability grant is ZAR 1980 per month which is often not enough to sustain financial well-being. Therefore, a disability pension should be seen as compensation rather than an employee salary and government programs should be adapted to promote work reintegration and negate the dependence on government systems.

When considering factors associated with post-SCI employment, most studies [2,5,37] focus on obvious barriers related to socio-demographic and injury-related factors. Previous studies have reported that environmental factors such as not having a reliable transport [8,45], difficulties accessing the healthcare [8], and employers' and coworkers' perceptions of the capabilities of

people with disabilities be barriers to returning to work. Our results show that environmental factors are a significant predictor of employment post-SCI. This could be attributed to employers being reluctant to hire individuals with SCI due to their perception that they will be less productive or would require costly assistive devices/infrastructure at work. Additionally, the lack of adapted assistive devices/technologies (e.g., stair lifts, walking aids) or transportation (adapted cars and public transport), for moving around short and long distances, could act as barriers to returning to work or maintaining work after SCI. In line with our results, previous studies [46,47] highlighted family and social support, lack of implementation policies, lack of physical access, and societal attitudes to be some environmental facilitators to employment for people with disability in South Africa [46,47].

Participants with SCI who did not require physical assistance were also more likely to be employed ($p = 0.016$). This suggests that rehabilitation approaches should aim toward self-sustaining routines to promote independence among individuals with SCI, where applicable. Our results also differ from previous studies that indicated age, the severity of the injury, independence of mobility and bowel continence [37] to be significant predictors to return to work post-SCI. The difference in post-SCI employment predictors could be attributable to sample size, SCI characteristics, time since injury and most notably the definition of employment/return to work used in the previous studies [8,37,48]. The definition of employment used in this study could be interpreted as 'at least one hour of paid work per week' of being permanently employed, apprenticeship, or self-employed. Unofficial day-to-day self-employment (i.e., working for a few hours) is common in South Africa, especially among individuals living in rural areas, therefore the definition is more inclusive to individuals with SCI that would otherwise be considered unemployed. Other studies have defined employment as 'working for a living', 'working for pay' or divided their participants into subgroups of homemakers and students [8]. It is worth noting that the large variation in the definition of employment makes it difficult to interpret and compare employment rates in different settings. The average age of SCI in unevenly developed resource settings like South Africa is low compared to developed countries and this often corresponds to the time of early career development and establishment, which could also explain the difference in unemployment rates. South Africa also has a high level of unemployment, especially among younger adults, which is further complicated by the additional socioeconomic challenges in the general population. This often translates to younger male adults engaging in high-risk societal activities which makes them more vulnerable to SCI.

Study limitations included that all the data were self-reported from a cross-sectional study, which could be prone to recall and selection bias. Furthermore, we lacked data on time spent during rehabilitation when the individual was unable to work. Although this is the first study in South Africa to look at factors associated with employment post-SCI, the sample size is relatively small and data have only been collected from 2 of the 9 provinces in South Africa, thus the results are not generalizable to the entire SCI population. However, cross-sectional studies are useful to guide stakeholders to factors that could potentially be related to outcomes of interest and provide a starting point for longitudinal studies. Future work should entail a longitudinal study to better capture the return-to-work pathways and factors associated with return to work in South Africa. Additionally, a qualitative study is needed to fully understand the depth of environmental challenges within the South African context.

In conclusion, this study provides the first insight into the factors associated with unemployment post-SCI in South Africa. The finding suggests multiple factors influence the employment rate, and due to the low-resource setting nature and socioeconomic challenges of South Africa, rehabilitation approaches (interdisciplinary models of care) encompassing improved intersectoral partnerships/collaboration, promoting functional independence, and developing problem-solving skills to mitigate environmental barriers are advocated. Furthermore, the study suggests social and labor development interventions – understanding the reluctance of employers to appoint persons with SCI as well as the lack of reinforcement of employment equity relating to persons with disabilities - to address meaningful occupations in community-dwelling persons with SCI in South Africa.

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ORCID

Lucian Bezuidenhout  <http://orcid.org/0000-0002-1051-4991>

David Moulae Conradsson  <http://orcid.org/0000-0003-0003-5513>

Conran Joseph  <http://orcid.org/0000-0002-3121-2685>

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