

ABSTRACT

Stroke impacts on a survivor's ability to participate in community activities such as return to work (RTW) and affects people who are still within the working age. Return to work contributes to life satisfaction and social identity at least partly through independence gained from income-generation. The impact of RTW programmes for stroke survivors is limited and not generalisable to South Africa. This study aimed to bridge this gap in South Africa, and was conducted within the Gauteng province as it comprises the largest share of the South African population.

Objectives and Methodology:

The aim of the study was to determine the current practice in RTW intervention programmes for stroke survivors in the Gauteng Province of South Africa and to establish the effect of a workplace intervention programme on the rate of RTW of previously employed stroke survivors. This study had two stages:

Stage one: A cross sectional survey was performed using a self administered questionnaire to establish current practice in RTW intervention programmes and the therapists' perceived barriers and enablers of RTW after stroke.

Stage two study included: a) a randomised controlled trial (RCT) to evaluate a six week RTW intervention, with follow-up at three and six months. The workplace intervention programme was tailored according to the functional ability and workplace challenges of each stroke survivor and was as follows: Week one: Assessment for work skill. The assessment included work modules which identified potential problems such as: visual discrimination; eye hand coordination; form and spatial perception; manual dexterity; colour discrimination; cognitive problems, and job specific physical demand factors. Week two: The therapist interviewed the stroke survivor and employer separately to establish perceived barriers and enablers of RTW. This was followed by a meeting between the therapist, stroke survivor and employer/supervisor to discuss and develop a plan to overcome identified barriers and to strengthen identified enablers based on consensus between stroke survivor and employer. Week three: A work visit for the stroke survivor to demonstrate what they did at work and identify what they could still do safely and what they could not do. This included vocational counselling and coaching; emotional support; adaptation of the working environment; advice on coping strategies to compensate for mobility and upper limb functional limitations; and fatigue management. Weeks four, five and six:

continuation of the work visits, while monitoring progress, and making necessary adjustments as per stroke survivor and employer's needs. This was done at the workplace while the participants continued with their usual therapy at the hospital. The control group received usual care. The primary outcome was RTW rate. The secondary outcomes included activities of daily living (measured with the Barthel Index); mobility (measured with the Modified Rivermead Mobility Index); basic cognitive function (measured with the Montreal Cognitive Assessment) and perceived quality of life (measured with the Stroke Specific Quality of life Scale). Another aim of stage two study was to: b) establish the stroke survivors' and employers' perceived barriers and enablers of RTW (this was done with the experimental group only); and to: c) identify predictors of RTW.

Stage one study results: Thirty six (68%) of the 53 questionnaires sent to stroke rehabilitation facilities were returned. Seventeen (47%) of the 36 clinical settings referred stroke survivors to facilities offering RTW services; 12 (33%) facilities did not refer stroke survivors for RTW and did not offer RTW services; and seven (20%) facilities offered RTW services. Of the seven facilities that rendered RTW services for stroke survivors, five (71%) communicated with the employer to discuss reasonable accommodation and four (57%) did assessments for potential to RTW. The most common reason given by the 29 facilities for not offering RTW services was that they referred stroke survivors to other therapists who offered these services. The second most common reason was the unemployment status of the stroke survivor at the time of having stroke. The therapists' most commonly perceived barriers of RTW were the severity of the stroke survivors' physical impairments ($n = 3$) (36%) and their employment status ($n = 11$) (31%) at the time of having stroke. The most commonly perceived enablers were willingness of the employer to reasonably accommodate the stroke survivor at work ($n = 12$) (33%), family support ($n = 8$) (22%) and increased length of hospital stay to allow for intensive rehabilitation ($n = 7$) (19%). Stigma in the workplace was the only variable which had a statistically significant relationship with the type of clinical facility therapists worked at ($p = 0.02$).

Stage two study results: The average age for the study group was 45 (SD: 8.7) years and the average stroke duration was 4.6 (SD: 1.8) weeks. There were 41 (51%) male stroke survivors and 39 (49%) female stroke survivors. Majority (55%) of the stroke survivors were breadwinners (63%), had a grade 11 to 12 educational level (64%), an income above R5000 (46%) and had a helper (74%) whom they did not have to pay (81%). Stroke survivors who returned to work had better quality of life at six months after stroke than those who did not RTW ($p = 0.05$).

Results from the qualitative study indicated that the perceived enablers of RTW included: ability of the employer to provide reasonable accommodation and good interpersonal working relationships between stroke survivor, employer and co-workers. The perceived barriers of RTW included: unaffordable reasonable accommodation costs; inaccessible transport; having cognitive (memory and attention) and speech impairments and high unemployment rates.

The overall RTW rate was 20% at three months follow-up and 40% at six months follow-up. Twenty seven percent of the stroke survivors in the intervention group returned to work at three months compared to 12% in the control group ($p = 0.13$). At six months, the majority of stroke survivors (60%) in the intervention group returned to work compared to 20% in the control group ($p < 0.001$).

The following factors were predictive of RTW: male gender ($p = 0.03$); fewer speech problems ($p = 0.02$); increased time off work post stroke ($p = 0.001$); ability to perform activities of daily living ($p = 0.02$); good mobility ($p = 0.01$) and good cognitive ability ($p = 0.02$). The stroke survivors in the intervention group were 5.2 times more likely to RTW than those in the control group at six months following stroke, and for every unit increase in the activities of the Barthel Index and Montreal Cognitive assessment score, the likelihood of RTW increased by 1.7 and 1.3 respectively.

Conclusion: A RTW intervention consisting of workability assessments and workplace visits was effective in facilitating RTW for stroke survivors in Gauteng province, South Africa. Key predictors of RTW included male gender; increased time off work post stroke; ability to perform activities of daily living; good mobility and good cognitive ability and were identified as facilitating RTW; speech problems were identified as barriers to RTW. Overall, these results suggest the need to direct resources towards increasing work place intervention strategies after stroke.

Key words: stroke; return to work; functional capacity assessment; activities of daily living; mobility; cognitive function; quality of life; factors that influence RTW; workplace intervention programme.