

Understanding post stroke fatigue: Implications for rehabilitation and everyday life

Jessica Vollertsen¹, Mathilda Björk², Anna-Karin Norlin², Elin Ekbladh³

1. Department of Rehabilitation, and Department of Health, Medicine and Caring Sciences, Linköping University, Motala, Sweden.

2. Pain and Rehabilitation Center, and Department of Health, Medicine and Caring Sciences, Linköping University, Linköping, Sweden.

3. Department of Health, Medicine and Caring Sciences, Linköping University, Linköping, Sweden.

Background

Each year, about 21,000 people in Sweden experience a stroke, and one in six are of working age (Figure 1). Despite advances in acute stroke care, many live with invisible impairments, particularly post-stroke fatigue (PSF). PSF limits everyday activities, participation, and return to work, and is consistently identified as one of the most important concerns among people living with stroke.

However, PSF remains insufficiently understood, especially in relation to everyday life, and existing studies are often based on small samples. Larger studies are therefore needed to better understand PSF and its impact on daily life and work.

Aim

To investigate the development of post-stroke fatigue and its impact on return to work and everyday life, and to examine whether post-stroke fatigue predicts functioning at one-year post-stroke.

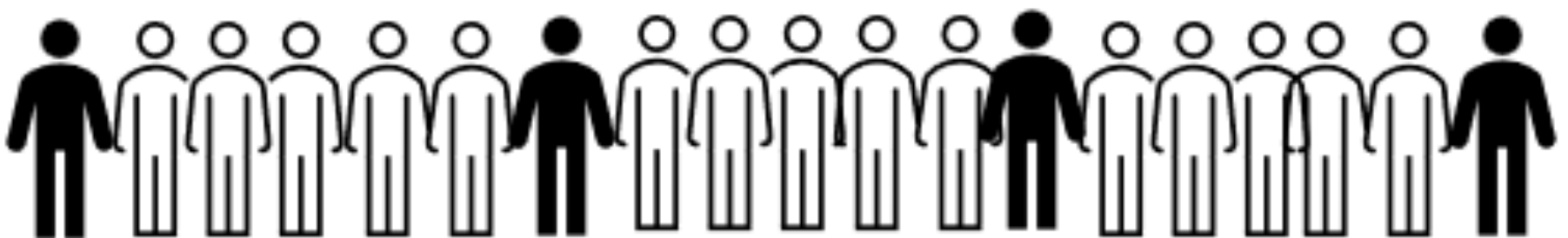


Figure 1. One in six people who experience a stroke are of working age.

Methods

This prospective registry-based cohort study used data from the Swedish Stroke Register (Riksstroke). The study included 2,850 individuals aged 18–63 years who experienced a stroke in 2017–2018 and were gainfully employed at stroke onset. Data were collected at 3 and 12 months post-stroke (Figure 2).

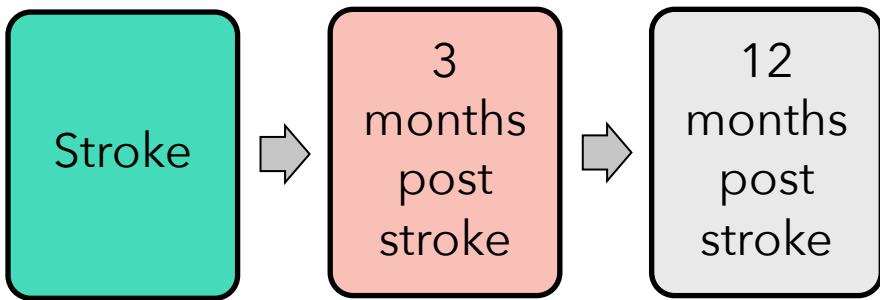


Figure 2. Data collection after 3 and 12 months.

Post-stroke fatigue was analysed using descriptive statistics and group comparisons between individuals with and without PSF, as well as four groups describing different PSF trajectories over time. Binary logistic regression was used to examine PSF as a predictor of functioning in everyday life.

Results

Post-stroke fatigue was common and increased over time, affecting 43% of participants at 3 months and 48% at 12 months post stroke. PSF was more frequently reported by women than by men at both time points (Figure 3).

Participants with PSF had significantly more difficulties in everyday activities than those without PSF, both at 3 and 12 months. They were more dependent in basic activities such as mobility, toileting and dressing, and more often needed help with household tasks.

PSF showed different developmental patterns over time, with many participants experiencing persistent or late-onset fatigue. These groups had the greatest limitations in everyday activities

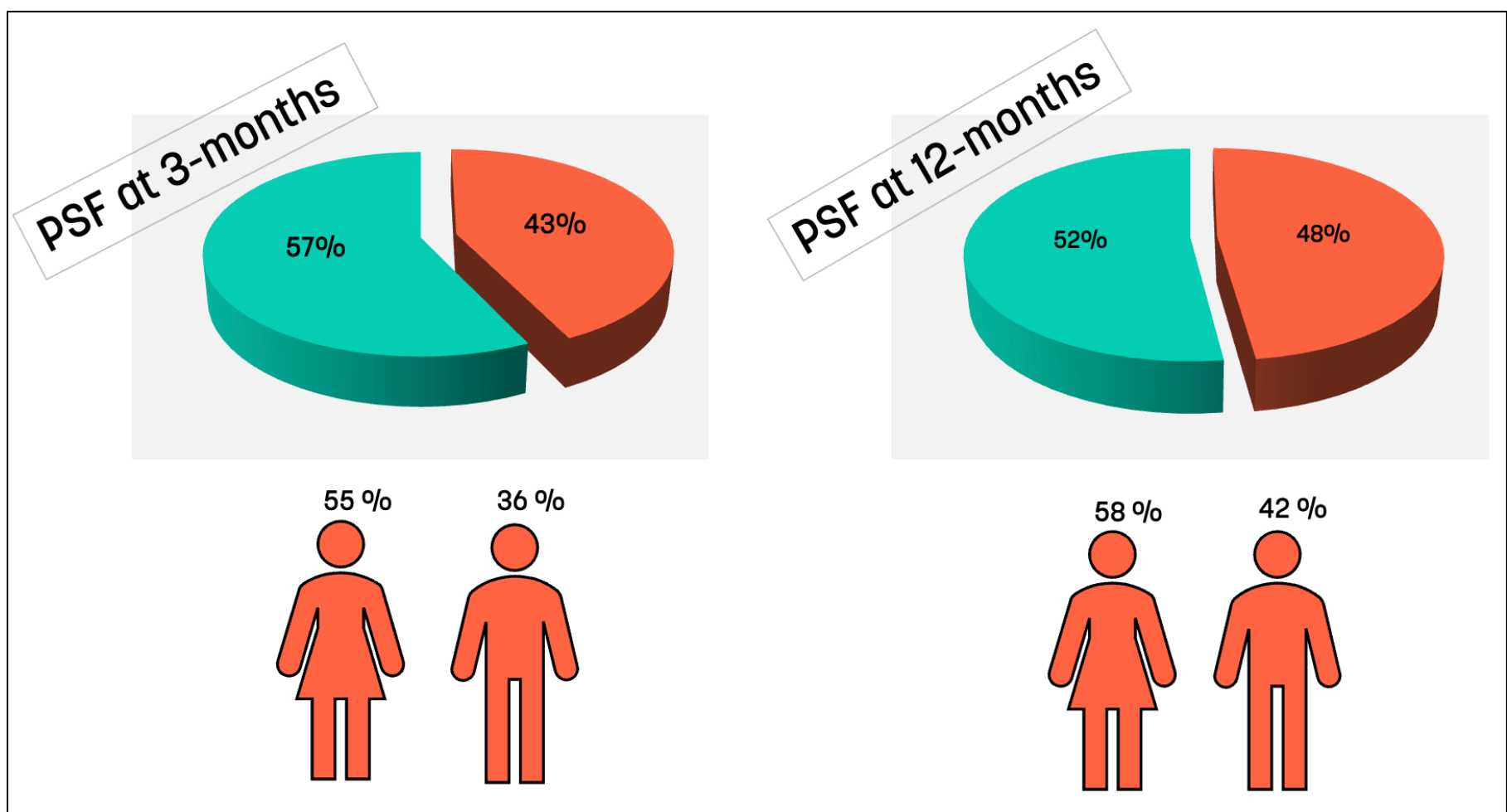
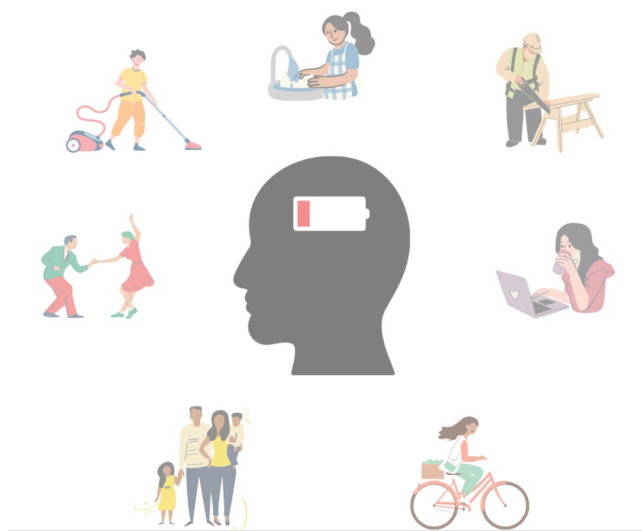


Figure 3. Post-stroke fatigue (PSF) at 3 and 12 months after stroke in women and men. Green indicates no PSF and red indicates presence of PSF.

Results

Return to work was strongly affected: only 27% of those with PSF had returned to work one year after stroke, compared with 61% among those without PSF. Likewise, most participants with PSF had not returned to their pre-stroke level of everyday life and activities.

Absence of PSF at 12 months was strongly associated with positive outcomes (Table 1). Participants without PSF were 5.7 times more likely to have returned to their everyday life and activities, 3.7 times more likely to have returned to work, and 2.9 times more likely to manage household responsibilities independently than those with PSF.



Conclusions

- ✓ Fatigue after stroke is common among people of working age
- ✓ The symptom of fatigue often persists or worsens during the first year after a stroke
- ✓ Fatigue is life-limiting and significantly impacts functioning in complex activities

Clinical implications

- ✓ Regular assessment of post-stroke fatigue and functioning in everyday activities beyond basic activities is central after discharge from hospital
- ✓ There is a need for interventions targeting post-stroke fatigue to improve the likelihood of returning to normal life and increase the chances of returning to work

Table 1 Lack of post-stroke fatigue and prediction of positive functioning in everyday life activities one year after stroke.

Independence in activities	OR	Adjusted OR	95 % CI for adjusted OR	<i>p</i>
Mobility	3.698	2.359	1.639 – 3.394	<0.001
Dressing	3.343	1.896	1.212 – 2.968	0.005
Toilet visits	4.253	2.421	1.352 – 4.336	0.003
Care of household	3.765	2.854	2.255 – 3.611	<0.001
Return to work	4.326	3.687	3.108 – 4.372	<0.001
Return to life/activities	7.085	5.748	4.731 – 6.984	<0.001

Note: Logistic regression with PSF as independent factor. OR is describing the chance of independence in everyday life activities. Tested and adjusted for sex, age and depression as potential confounders.