

## Effect of gait training on post-stroke depression and quality of life over ground vs. treadmill training

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**Background & Aim:** Post-Stroke Depression (PSD) has a significant impact on Quality Of Life (QOL) for both the patient and his/her family members. Physical exercise including gait training has been reported to be positively associated with a reduction in depressive symptoms among stroke survivors. To the best of the researcher's knowledge, there are some studies that have been conducted to investigate the effect of treadmill gait training on PSD, but not for the effect of over ground gait training. The aim of the current study was to investigate whether there is a difference between the effect of treadmill training and over-ground training on depression and quality of life post-stroke.

**Method:** Eighteen (18) patients were included in the study. All participants were randomized into two groups: Treadmill or over-ground group. Both groups received gait training, either on treadmill or over-ground, for 20 minutes, 3 sessions per week for 4 weeks. Outcome measures: Arabic version of Beck Depression Inventory (BDI); Arabic version of the World Health Organization Quality of Life- Brief; the 6 min walk test and the 10 m walk test.

**Result:** Data findings reveal an equal significant difference between pre and post-training BDI scores for the treadmill group and over ground group ( $p=0.003$ ). In regard to the QOL, there were significance differences for physical health domain in treadmill group ( $p=0.025$ ) and psychology domain in over ground group ( $p=0.028$ ). Negative correlation was found between depressive symptoms and all QOL domains except physical health. Gait capacity significantly was correlated negatively with depression ( $R=-0.056$ ,  $P=0.02$ ).

**Conclusion:** Results show both over-ground and treadmill was equally effective for reducing depressive symptoms and improving gait capacity. Decrease depressive symptoms may lead to improve QOL among stroke survivors. In rehabilitation sitting therapist can use either over-ground or treadmill training to improve gait performance as well decrease depressive symptoms.

### Biography

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