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Physical Function, Depressive Symptoms, and Quality of Life in Stroke Patients With Post-Acute Care

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In response to changes in disease characteristics, demographic structure, and the national health insurance payment system, post-acute care (PAC) has gradually been developed in Taiwan to facilitate accomplishing timely transition from acute medical care to long-term care. In January 2014, the National Health Insurance Administration of the Ministry of Health and Welfare implemented a project entitled "The Pilot Project of Enhancing Post-acute Care Quality through National Health Insurance: Using Stroke as an Example." The stroke PAC project was based on an integrated care model, in which high-intensity rehabilitation including physical therapy (PT), occupational therapy (OT), and speech therapy (ST) was administered to patients with stroke during the golden period for treatment, to expedite the patients' physical function recovery and shorten their length of hospital stay for rehabilitation.

The purposes of this study was to follow up post-acute patients with stroke and examined their physical functions, status of depression, quality of life (QoL), and the changing trends of and correlations between these variables after the patients received post-acute care. This study also explored the predictive factors for the QoL of these post-acute patients with stroke.

This was a prospective and longitudinal study conducted between July 2017 and March 2018. The individuals with stroke who met the following inclusion criteria from Neurology Department wards in a Chiayi County regional teaching hospital in middle Taiwan were invited to participate. Inclusion criteria were patients who (i) were diagnosed either ischemic or hemorrhagic stroke within 8 to 30 days, (ii) were more than 20 years old, (iii) were able to communicate with mandarin, (iv) modified Rankin Scale (mRS) 2-4, and (v) agreed to sign consent form. Exclusion criteria included patients who (i) were diagnosed either with mental illness or declined cognitive function by physicians, (ii) aphasia (including motor aphasia) or severe hearing impairment, (iii) were diagnosed with depression or administered antidepressants by physicians, and (iv) were transferred to other wards for specific treatment. In current study, the stroke PAC program, usually 3-6 weeks, was delivered twice a day and each time was between 90 to 120 minutes including PT, OT, or ST. The physicians may extend the PAC program which was dependent upon patients' progress and needs but no more than 12 weeks. Research instruments employed were the Barthel Index (BI), mRS, instrumental activity of daily living (IADL), 15-item Geriatric Depression Scale (GDS-15), and Stroke Impact Scale Version 3.0 (SIS V3.0). These scales were administered on the 1st, 4th, 8th, and 12th week. The collected data were analyzed using descriptive and inferential statistics, involving independent t test, Chi-squared test, one-way analysis of variance, Pearson's correlation coefficient, generalized estimating equation (GEE), and multiple linear regression, to investigate the predictive factors that influenced the QoL of post-acute patients with stroke.

A total of 44 patients with stroke met the inclusion criteria and completed a baseline assessment. Three participants were excluded (6.8 % attrition rate) from the study because of loss of follow up. Finally, 41 patients with stroke were enrolled in the study. The results showed that 90.24% of the patients had infarction, and 55.63% of the patients were male. On average, the patients aged 65.00 ± 15.07 years (ranging from 34 to 91 years old). They were administered PAC program on the 17.68 ± 5.91 th day (on the 7th–29th day) after developing stroke, and the average length of hospital stay for post-acute care was 39.27 ± 16.02 days (11–63 days). Regarding physical functions, the patients showed significantly gradual improvements in the BI and IADL over time after the care program. The mRS scores showed a significantly substantial decrease on the 8th week. Statistically significant differences in the patients'

scores of QoL (SIS) was achieved over time. BI and GDS-15 were crucial predictive factors for patients' QoL on the 4th, 8th, and 12th week after stroke.

Future studies were recommended to compare the changing trends of physical functions, depression symptoms, and QoL between patients who received post-acute care and those who did not. This study can serve as a reference for clinical medical personnel in caring for patients with stroke.

Title:

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References:

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Abstract Summary:

The stroke patients with PAC program showed significantly gradual improvements in the BI, IADL, mRS, and QoL over time. The BI and GDS-15 were crucial predictive factors for patients' QoL on the 4th, 8th, and 12th week after stroke.

Content Outline:

1. To follow up post-acute patients with stroke and examined their physical functions, status of depression, quality of life (QoL), and the changing trends of and correlations between these variables after the patients received post-acute care.
2. To explore the predictive factors for the QoL of these post-acute patients with stroke.

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