

## Physiotherapy Treatment Approaches on Functional Outcomes in Stroke Patient

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According to recent evidence for adult stroke rehabilitation, no single physiotherapy treatment approach is superior to the other therapies in improving mobility of stroke patient [1-3]. In addition, a recent international guideline for adult stroke rehabilitation suggested that the effectiveness of neurophysiological approaches including Bobath, Brunnstrum and Proprioceptive Neuromuscular Facilitation compared with other treatment approaches for motor retraining after acute stroke has not been established [2]. When no single approach is better than others, therapists move one step forward from individual treatment approach to mixture of approach in treating stroke patient [4,5]. In fact, most therapists already provide mixture of approaches during the rehabilitation process for each individual patient [6,7] but one may suppose that a different combination of treatment approaches will not generate significant differences in functional outcome. My retrospective study investigated the functional outcomes of different combination of physiotherapy treatment approaches for stroke patients [6]. By interviewing the therapists and reviewing their treatment records, we had a clear picture of selection and combination in treatment approaches that were used. And the study concluded that a different combination of treatment approaches may generate a different degree of functional outcome in stroke rehabilitation but the difference was not significant [6].

Why there is so difficult to find out which approach or which mixture of approach is better than others? I found that different therapists have different preferences in choosing treatment approaches [6]. And it is difficult to clearly define which approach a therapist is using to treat a stroke patient because it is not sure the therapist is applying the interventions or just the concepts of an approach. For example, two therapists use the same approach to treat a stroke patient, the type of interventions applies to the patient may be different because they just using the same concept but not same intervention. In contract, two therapists use different approaches to treat a stroke patient, the interventions apply to the patient may be the same because the interventions are share among two approaches. Even the same therapist apply the same approach to treat a stroke patient, the parameters of the

intervention may vary from session to session. Another issue is there was a lack of description of the actual content of approaches in some studies [8] and the intervention described is often not recognizable as current practice of the approaches [8].

How to measure the type and parameters of interventions of a treatment approach is a challenge. When we plan to compare the effectiveness between different approaches or mixture of different approaches by the functional outcomes of stroke patients, the essential consideration are how to differentiate we will compare the interventions or the concepts of approaches? Do the interventions are recognizable of specific treatment approaches? How to describe the intervention parameters in details? If we cannot answer the questions, we do not compare the effectiveness of different approach, we may just compare the clinical performance of different therapist.

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