
Emmett Therapy at the Mareeba Garden Settlement Aged-Care Facility



A review of data

Emmett Therapies received a report in April 2006 from the Director of Nursing at the Mareeba Garden Settlement Aged Care Facility. Text and data from the original report is reproduced (*in italics*) in the following article. A statistical analysis of the data has been conducted to enable comparison of this study to other current, and future, Emmett research. A Paired t-test¹ was performed to provide a statistical calculation of differences between average before and after scores. Additionally, an Effect Size² score is provided to indicate the magnitude of difference between scores. The Effect Size measure can be used to compare studies of different design, sample size and/or features.

Physiotherapy Balance Scale: Dots Data September 2005

The following studies were conducted at the Mareeba Garden Settlement Aged Care Facility in North Queensland. The facility employs a staff member trained as an Emmett Therapist for the purpose of treating residents and staff with sore and stiff shoulders, necks, back and legs. These muscle release techniques have significantly improved balance for many of the residents, as shown below. It should also be noted that the feedback from residents is that this treatment also gives them relief from pain and hence required less analgesia. Treatment for the staff also reduces pain enabling them to return to work without having to take time off.

Standing Unsupported One foot in front

Instruction: (Demonstrated to subject.) Place one foot directly in front of the other. If you feel that you cannot place your foot directly in front, try to step far enough ahead that the heel of your forward foot is ahead of the toes of the other foot.

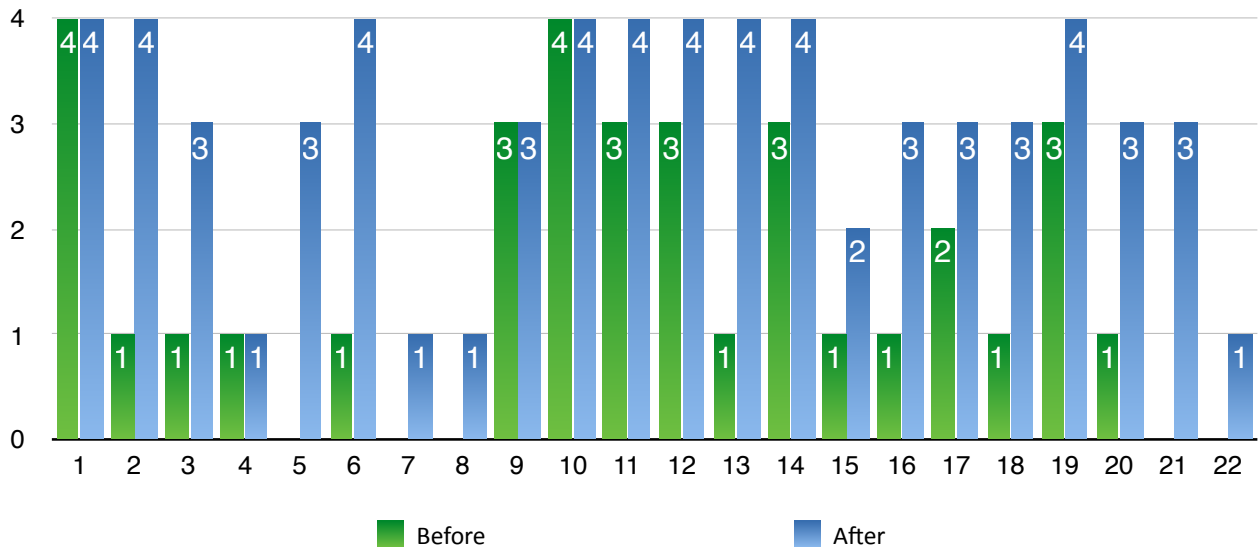
The Physiotherapy Scale was used to rate each client;

- 4: Able to place foot in tandem independently and hold for 30 seconds*
- 3: Able to place foot ahead of other independently and hold 30 seconds*
- 2: Able to take small steps independently and hold 30 seconds*
- 1: Need help to stand but can hold 15 seconds*
- 0: Loses balance while stepping or standing*

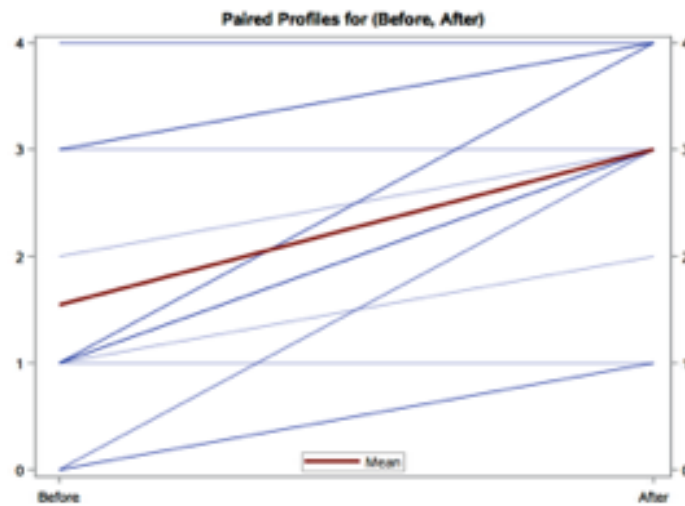
¹ A p-value is a rating of statistical significance. A p-value of < 0.05 indicates that differences between before and after scores are statistically significant and not just by chance.

² Effect Size is a statistical measure of how likely it is for change to occur and is utilised to compare studies. A study with a "Cohen's d" effect size of 0.2 would indicate a small effect size; 0.5, a medium effect size; and 0.8 would be considered a large effect size.

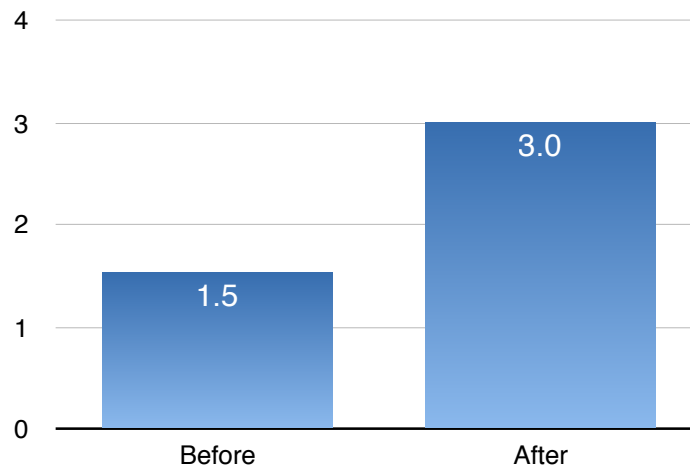
Standing Unsupported One Foot in Front.
Before and After Emmett Session Scores.



The following graph illustrates the 'Before' and 'After' paired scores for each 'Standing Unsupported One Foot in Front' participant.



Standing Unsupported One Foot in Front.
Average change in scores - 'Before' and 'After'.



'Unsupported One Foot in Front' Analysis

'Unsupported One Foot in Front' data was analysed using a Paired t-test in the statistical software SAS Studio. The analysis shows scores following an Emmett session were statistically and significantly higher than 'Before' scores ($p\text{-value}^* < 0.01$). A Cohen's d, Effect Size† of 1.4, demonstrates a remarkable change in client performance after an Emmett session.

Standing on one leg

The task was for clients to stand unsupported on one leg.

The Physiotherapy Balance Scale was used to rate each client;

4: Able to lift leg independently and hold for more than 10 seconds

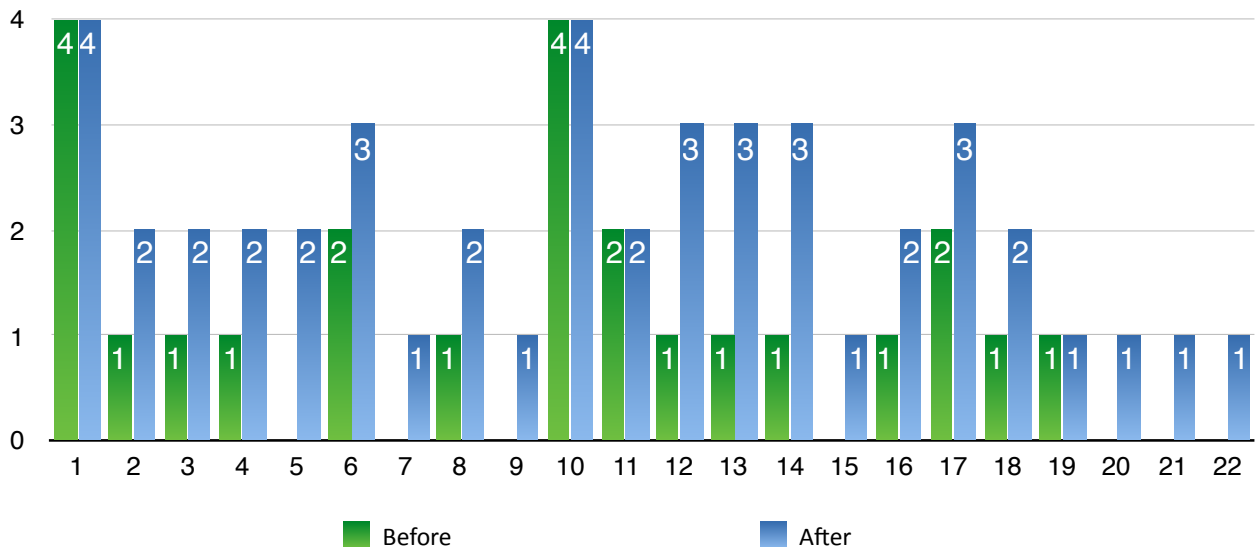
3: Able to lift leg independently and hold for 5 - 10 seconds

2: Able to lift leg independently and hold for more than 3 seconds

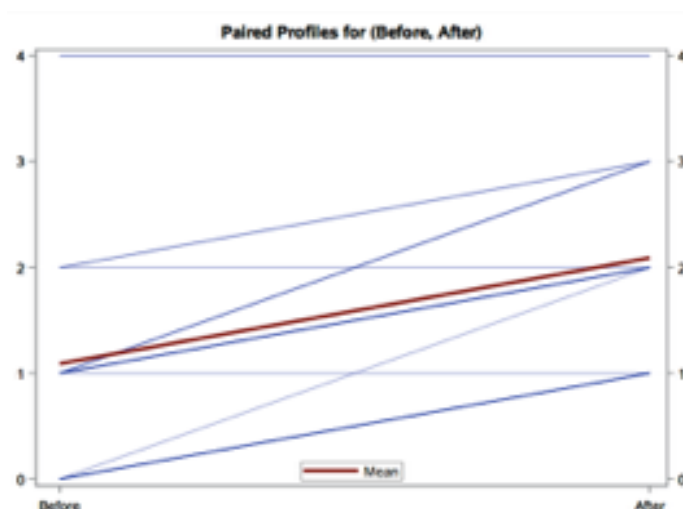
1: Tries to lift leg but unable to hold for 3 seconds, but remains standing independently

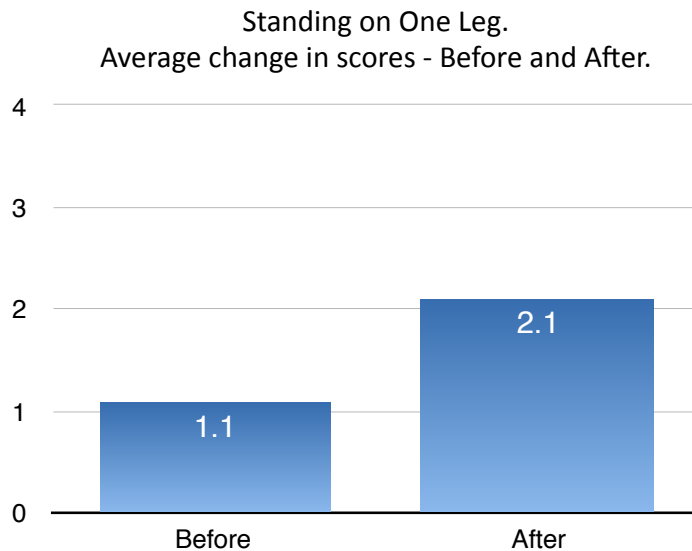
0: Unable to try or needs assistance to prevent falling

Standing on One Leg.
Before and After Emmett Session Scores.



The following graph illustrates the 'Before' and 'After' paired scores for each 'Standing on One Leg' participant.





'Standing on One Leg' Analysis

'Standing on One Leg' data was analysed using a Paired t-test in the statistical software SAS Studio. The results were similar to the 'Unsupported One Foot in Front' data; they demonstrated that an Emmett session significantly improved 'After' scores (p-value* < 0.01). A Cohen's d, Effect Size† of 1.62, similarly indicates that the Emmett session had a meaningful impact on the client's 'After' score.

Discussion

This article summarises and analyses the data from the 2005 Aged Care study and, by employing specific statistical tools, the results of this earlier study can be compared to more recent research. For example, the inclusion of an Effect Size score enables the 2016 Cardiac Challenge study, which uses an 11-point pain scale, to be compared to the 5-point balance scale in this age-care study. The Paired t-test and Effect Size scores in the Aged Care study reveal similar results to Emmett studies conducted in 2016. They all demonstrated positive and immediate changes in the group receiving Emmett Therapy.

In the Aged Care study, most clients experienced substantial improvements in functional standing ability and balance. Therefore, these impressive results, combined with more contemporary Emmett research, illustrate the value of this treatment in improving such measures as balance and pain relief. Additionally, as stated in the testimonial from the Director of Nursing at the Aged Care Facility, having a staff member who was trained in Emmett Therapy proved to be an asset to the team, improving the quality of life for both the residents and other staff.

Research information compiled by:

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**Testimonial from the Director of Nursing
Sue Boisen
Mareeba Garden Settlement - North Queensland, Australia**

The Mareeba Garden Settlement employs a staff member trained as an Emmett Therapist for the purpose of doing muscle release on the residents and staff. The therapist treats residents with sore and stiff shoulders and necks, with sore backs and legs and does a muscle release which has been shown to increase balance when tested before and after Emmett Technique. (Refer to graph next page)

Feedback from the residents has shown that this form of treatment gives them relief from the pain and so requires less analgesia. For some residents, treatment may be required on a regular basis but the relief, if sometimes not lasting, is well worth the effort.

The therapist also treats staff for the same sort of problems, with good results and so enabling staff to return to work without having to take time off to recover.

The therapy is non-invasive and is gentle enough for the most frail of our residents.

7/4/2006