Evaluating the Clinical Effectiveness of Telerehabilitation during the Pandemic

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BACKGROUND:

In the wake of the COVID-19 pandemic, a re-boot for rehabilitation was required (Phillips et al., 2020). Social distancing requirements in lockdown meant clinicians within Recolo UK Ltd delivered rehabilitation remotely since March 2020.

AIMS:

To assess clinical effectiveness of rehabilitation delivered in the period of lockdown compared to previous face-to-face rehabilitation within the organisation.

METHOD:

The clinical effectiveness of therapy pre- and during lockdown was reported using a survey of perceived effectiveness and a comparative clinical outcome analysis.

Survey: A clinical effectiveness questionnaire derived from the Child and Adolescent Verona Service Satisfaction Scale (CAMHSSS; Ayton et al., 2007) and the Survey of Parent Satisfaction with Paediatric Neuropsychological Evaluations (Bodin et al., 2008) was completed by 10 parents of children receiving rehabilitation. 10 practitioners delivering rehabilitation completed Chapman et al. (2020) clinician's survey of perceived clinical effectiveness. Additionally, global preference questions were asked of parents and practitioners. A paired sample t-test was carried out to compare the parents' effectiveness perception. A Friedman test was carried out to compare clinicians' and parents' preferences.

Outcome: Questionnaires completed by parents of children undergoing rehabilitation were CASP, PEDSQL and SDQ. T1-T2 change scores were calculated for the two different periods: Pre-Pandemic (pre-2020) and During Pandemic (2020-21). Independent t-tests were used to compare the difference in mean change scores between these periods.

RESULTS:

Survey results: Remote rehabilitation was considered more effective than face-to-face according to parents: t (9) =2.145, p = 0.06 (Figure 1). Parents and practitioners preferred face-to-face rehabilitation most, then blended and finally remote. Differences were non-significant for parents xr^2 (2) = 5.765, p = .065 but significant for clinicians xr^2 (2) = 7.538, p = .023 (Figure 2).

Outcomes results: None of the change scores showed statistically significant differences comparing the two periods. Figure 3 shows the participation measure showed increased participation in period 1 and reduced participation in period 2, t (20) =0.624, p=0.54. Health related quality of life did not change significantly in both periods t (21) =0.96, p=0.92. Regarding family impact, there was a non-significant improvement in both periods, t (27) =0.068, p=0.82. Reductions occurred in fatigue (t (11) = 0.043, p=0.96) and emotional difficulty (t (31) = 0.83, p=0.41) but did not differ between the periods.

CONCLUSIONS:

With non-significant differences in perceived and actual change ratings of clinical effectiveness, remote interventions appeared to have some level of acceptability. Discrimination of the effects of lockdown, the pandemic versus treatment modality on outcome is not demonstrable from this method.

RECOMMENDATION:

Further analysis of survey data.
Finer grained analysis of the therapy modality delivered in and out of lockdown.
Increasing survey sample size and adding qualitative interviews into a future study.

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Figure 1: Parent rating of perceived effectiveness of mode of rehabilitation delivery

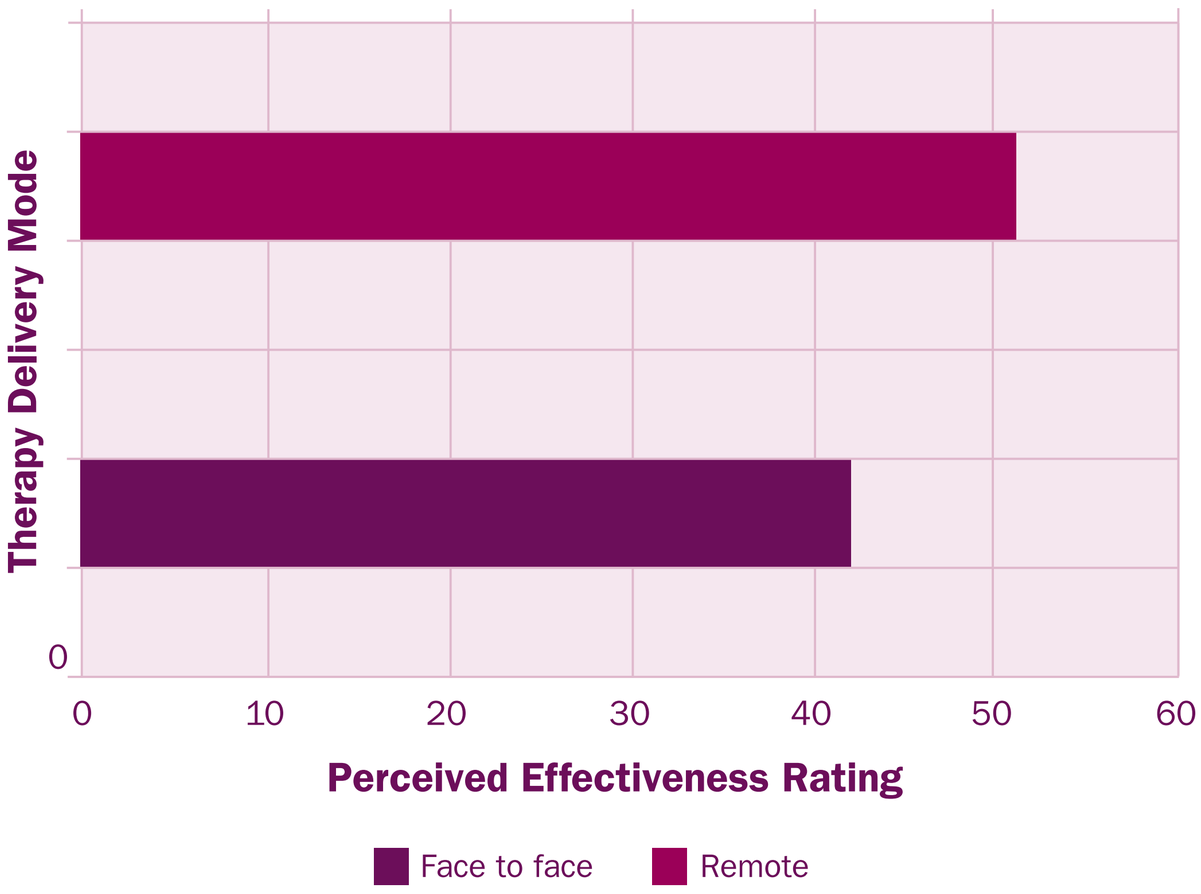


Figure 2: Parent and clinician global ratings of preference in mode of rehabilitation delivery.

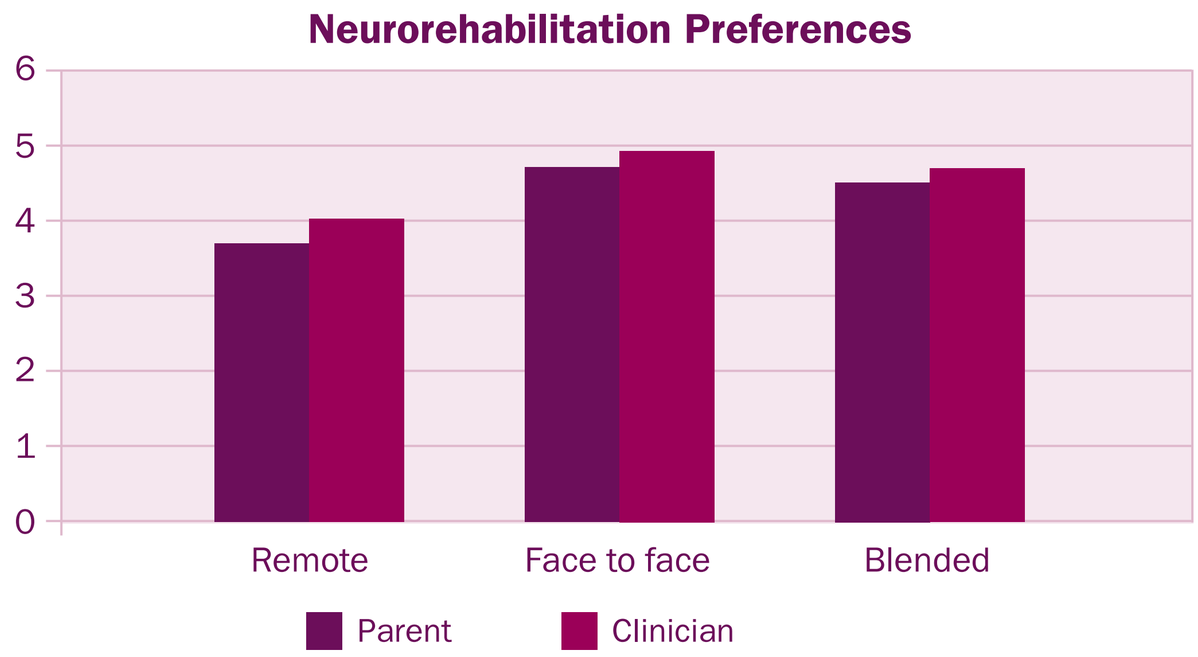
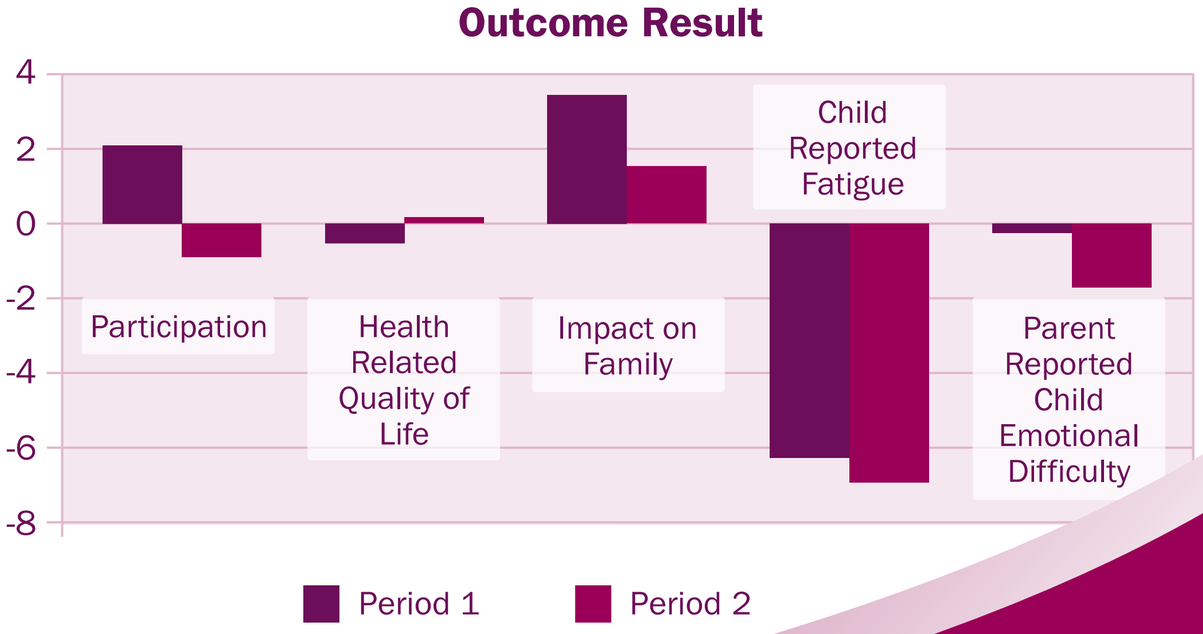


Figure 3: Outcome change scores in two conditions: 1 pre-pandemic, 2 pandemic period.



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