Background and Aim

- Complex Regional Pain Syndrome (CRPS) is a condition characterised by highly distressing, persistent pain, usually confined to one extremity.
- Despite 85% of cases resolving within two years, a small proportion are considered resistant to unimodal interventions.
- Profound physical disability and emotional suffering often ensues\(^2\),\(^3\).
- Aim: to investigate whether treatment resistant CRPS could be effectively managed using an intensive two week interdisciplinary rehabilitation program.

Programme Ethos

- **Aim:** increase physical functioning and equip patients with self-management strategies to optimise how they are living with the condition.
- It follows the 4 pillars of care recommended by NICE, UK: CRPS education, physical and occupational therapy, psychology input, and medication, delivered via group and individual sessions.
- Seminars on pacing, set back planning and sleep hygiene are also provided, along with daily hydrotherapy and relaxation.

Method

- Adults referred to the service, who met Budapest diagnostic criteria for CRPS and attended the rehabilitation program, completed pre-post intervention questionnaires.

These measures indexed:
- Physical functioning (lower limb function (WAQ), upper limb function (Quick-DASH), general health (EQ-SD-SJ)).
- Pain severity and interference (BPI).
- Psychological functioning (depression (PHQ-9), generalised anxiety (GAD-7), kinesiophobia (TSK), pain self-efficacy (PSEQ))

- Data from first time program attendees, collated from 04/17-12/18 was included and analysed using paired-sample t-tests, with a Bonferroni corrected p-value of 0.006.

Results

- 223 individuals formed the sample (age range 18-78, mean 46.1yrs (SD=12.1)); table 1 shows further demographics.
- Table 2 details descriptive and inferential statistics of the pre-post intervention outcome variables.
- Significant post-program improvements were evident across all measures with small-medium effect sizes, except lower limb function (p>0.006).
- The greatest improvement was shown in pain self-efficacy (% change, 34.6%) and least in pain severity (%) change, 7.3%.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Pre-Program Mean (SD)</th>
<th>Post-Program Mean (SD)</th>
<th>t</th>
<th>d</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Functioning</td>
<td></td>
<td></td>
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<tr>
<td>General Health (EQ-SD-SJ)</td>
<td>209</td>
<td>24.90 (22.49)</td>
<td>54.77 (22.32)</td>
<td>-3.77</td>
<td>0.24</td>
</tr>
<tr>
<td>Upper Limb Function (Quick-DASH)</td>
<td>119</td>
<td>69.21 (16.78)</td>
<td>63.47 (17.75)</td>
<td>4.11</td>
<td>0.31</td>
</tr>
<tr>
<td>Lower Limb Function (WAQ)</td>
<td>99</td>
<td>23.76 (19.47)</td>
<td>23.89 (11.45)</td>
<td>0.81</td>
<td>0.56</td>
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<tr>
<td>Pain</td>
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<tr>
<td>Pain severity (BPI)</td>
<td>179</td>
<td>6.66 (1.72)</td>
<td>6.19 (2.03)</td>
<td>0.30</td>
<td>0.26</td>
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<tr>
<td>Pain interference (BPI)</td>
<td>179</td>
<td>6.04 (2.08)</td>
<td>5.76 (3.30)</td>
<td>0.41</td>
<td>0.56</td>
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<td>Emotional Functioning</td>
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<tr>
<td>Depression (PHQ-9)</td>
<td>208</td>
<td>14.00 (9.69)</td>
<td>11.25 (6.08)</td>
<td>8.82</td>
<td>0.55</td>
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<tr>
<td>Generalised anxiety (GAD-7)</td>
<td>215</td>
<td>10.92 (7.79)</td>
<td>8.97 (5.30)</td>
<td>7.93</td>
<td>0.45</td>
</tr>
<tr>
<td>Pain self-efficacy (PSEQ)</td>
<td>201</td>
<td>19.56 (1.17)</td>
<td>26.76 (12.30)</td>
<td>-9.56</td>
<td>0.57</td>
</tr>
</tbody>
</table>

**Significant at p <0.05 (t), p<0.01 (d)**

Conclusions

- This study demonstrates that an intensive rehabilitation programme yields significant improvements, across a number of measures indexing pain, physical and psychological functioning, for chronic cases of treatment resistant CRPS.
- This challenges a widely held belief that treatment gains are restricted to the first year post CRPS onset.
- These findings are in line with the premise that improving general functioning and self-efficacy should be the primary treatment goal for individuals diagnosed with chronic, treatment resistant CRPS, rather than a sole focus of pain reduction.
- Future data analysis is scheduled to determine whether these gains can be sustained in the longer term and if so, for whom.

References