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Does Patient Self-Efficacy at Intake Predict the Therapeutic Outcome?

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INTRODUCTION

The biopsychosocial model has become progressively understood and acknowledged amongst physical therapists. While depression, catastrophizing, and fear-avoidance have been the focus of research looking at psychosocial risk factors, Foster has identified self-efficacy to be a more important factor in influencing patient outcomes in a primary care setting. Furthermore, research has demonstrated that higher self-efficacy scores are associated with higher levels of consistency and performance on motor tasks, and higher levels of motivation and academic achievement. Self-efficacy levels have been shown to indicate adherence levels to exercise, particularly when experiencing persistent pain.

Though some of the risk factors for poor rehabilitation outcomes might not be modifiable, it is possible others may be recognized and addressed during physical therapy (e.g., fear-avoidance behaviors, self-efficacy) by using a cognitive behavioral or psychosocial approach. Consideration of a person's psychological presentation may direct treatments in order to decrease potential barriers and maximize the possibility for positive outcomes. The purpose of this study was to investigate the relationship between patient self-efficacy (SE) levels at initial evaluation and outcomes from physical therapy treatment. We hypothesized that higher SE levels would be correlated with more successful outcomes at the end of the episode of care.

METHODS

Subjects completed a General Self Efficacy Questionnaire (GSE) prior to their PT evaluation. A relevant outcome measure for each patient corresponding to the area of the body affected and The Numeric Pain Rating Scale (NPRS) were completed at the physical therapy evaluation by the treating PT and/or SPT. Specific therapeutic outcome measures included: Oswestry (ODI) for low back pain, Neck Disability Index (NDI) for neck conditions/pain, Lower Extremity Functional Scale (LEFS) for conditions of the lower extremities, and the Shoulder Pain and Disability Index (SPADI) for conditions related to the shoulder. After 6-12 visits, the outcome measure and NPRS were completed for the second time at the discharge from the episode of care.

RESULTS

The average initial GSE score for all subjects (n=11) was 79.8%.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Outcome Measure</th>
<th>Initial GSE Score</th>
<th>Final GSE Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pt1</td>
<td>ODI</td>
<td>89.5%</td>
<td>68.7%</td>
</tr>
<tr>
<td>Pt2</td>
<td>ODI</td>
<td>75.0%</td>
<td>49.6%</td>
</tr>
<tr>
<td>Pt3</td>
<td>ODI</td>
<td>85.0%</td>
<td>50.0%</td>
</tr>
<tr>
<td>Pt4</td>
<td>ODI</td>
<td>90.0%</td>
<td>67.5%</td>
</tr>
<tr>
<td>Pt5</td>
<td>ODI</td>
<td>80.0%</td>
<td>39.0%</td>
</tr>
<tr>
<td>Pt6</td>
<td>ODI</td>
<td>89.5%</td>
<td>68.7%</td>
</tr>
<tr>
<td>Pt7</td>
<td>ODI</td>
<td>75.0%</td>
<td>49.6%</td>
</tr>
<tr>
<td>Pt8</td>
<td>ODI</td>
<td>85.0%</td>
<td>50.0%</td>
</tr>
<tr>
<td>Pt9</td>
<td>ODI</td>
<td>90.0%</td>
<td>67.5%</td>
</tr>
<tr>
<td>Pt10</td>
<td>ODI</td>
<td>80.0%</td>
<td>39.0%</td>
</tr>
<tr>
<td>Pt11</td>
<td>ODI</td>
<td>89.5%</td>
<td>68.7%</td>
</tr>
</tbody>
</table>

The average initial GSE score was 79.8%. For the participants whose outcome measure scores improved and met the specific MCID (n=4), the average GSE score was 83.0%, and 85.0% for the 8 subjects who saw overall improvement regardless of whether the MCID was met or not. For the 3 participants whose condition did not change or whose condition worsened the initial GSE score was 69.3%. A trend in the averages of the GSE scores indicates a possible relationship between SE and therapeutic outcomes. However, while a Point Baseline Correlation revealed a moderate positive correlation (r=0.509) between initial GSE scores and the specific therapeutic outcome measures it does not reach significance (p=0.149).

CONCLUSIONS

The lack of significant correlation between GSE at intake and therapeutic outcome may signify a dissociation between self-efficacy (SE) and therapeutic outcomes, or unique conditions in this study. The average initial GSE score for subjects who improved versus subjects who did not was notably different, indicating support for a correlation between variables. The relatively high GSE scores of this population indicate the need for larger sampling and expansion of the psychosocial characteristics measured. Researchers collecting data in an educational setting should consider generalizability of this setting.

RELEVANCE

Despite the limitations and lack of statistical significance, this research offers some support that SE can impact the success of physical therapy (PT). Though the average GSE score for all subjects was particularly high with limited variability, there was a noticeable difference between the average GSE scores of subjects who saw improvements in their outcomes versus subjects who did not. This possible relationship between SE and PT outcomes, with low SE putting patients at risk for poor outcomes, warrants further research to further examine this relationship. Future research with larger sample sizes, broadened psychosocial measurement, and heightened accuracy of outcome measurement administration are necessary to further understand the relationship between SE and PT outcomes. Additionally, it may be beneficial to examine whether SE can be modified throughout PT to ensure optimal results. If indeed SE can be enhanced in the PT setting, clinicians would be encouraged to adjust treatment approaches to encourage SE in patients who are thought to be at higher risk for negative outcomes based on their GSE score or other standardized psychosocial measure.

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