Detailed Summary: Influence of Rolfing Structural Integration on Lower Limb Mobility, Respiratory Thorax Mobility, and Trunk Symmetry: A Retrospective Cohort Study

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Background

* Structural Integration (SI) is often sought by patients to improve chronic problems with joints or posture. But few peer-reviewed studies have looked at those outcomes in more than a small number of patients. A 2022 analysis of measurements recorded by Helen James found increases in shoulder and hip ranges of motion (Brandl 2022)The present study expands on that work by looking at a different set of Dr. James' measurements.

Methods

* This study looked at changes in chest expansion during normal and full inspiration, trunk symmetry, and hip and knee flexion in patients whom Dr. James had treated with ten sessions of Rolfing™ Structural Integration.
*. This study included records of 563 subjects aged 18-20 years, with Body Mass Index of 19-29, for whom measurements of at least one of chest expansion, trunk symmetry, or hip or knee flexion had been recorded.
* Statistical analysis found the average size of changes in each of the five types of measurement, the amount of variation among patients in the amount of change, and estimated the chance that the larger population of all similar patients might not have any change at all from the same SI treatment.

Outcomes

* Improvements were found in chest expansion during full inspiration, trunk symmetry, and passive range motion of hips and knees.
* The improvement in each of the five outcomes was statistically significant at a p-value of less than a p=0.001. This is an estimate that there is at most a 0.1% chance that if the study were repeated with all similar subjects no average improvements would be found, and there is a 99.9% chance that the same or a greater levels of average improvement would be found. This is regarded as a very high level of confidence that the beneficial effect of SI found in this study might be generalized,
* Improvements in knee flexion and chest expansion on full inspiration were large enough to also be clinically significant, meaning that they would probably have been regarded as worthwhile by patients.
* Similar levels of statistical and clinical significance were found for men and women as separate groups, with the exception that changes in chest expansion during normal breathing were not statistically significant in the male group.

Strengths

* The 563 cases included in this study were carefully selected from Dr. James' records of a larger number of patients (727) to create a group with more limited variations in age and Body Mass Index, and both male and female subjects were included,

* Each subject included had received ten sessions of SI from Dr. James, who had been fully trained in that method at the Rolf Institute of Structural Integration®.
* The methods of measurement that Dr. James used were standardized, previously published, and widely accepted in the field of physical therapy, and she had also taught those methods to physical therapy students,
* Appropriate methods of statistical analysis were used.

Limitations

* There are a number of limits on generalizing from the outcomes of studies like this that analyze measurements collected in the past by a single therapist. Following are the chief limitations for this study, each of which was acknowledged in the published article.
* The measurements were taken and recorded by the same person who provided the SI treatments, which is generally regarded as posing a higher risk of bias (even unconscious bias) in the record.
* The absence of data collected at a longer time after the patients' tenth SI treatments (for instance at 6 months after the final treatment), meant that it was not possible to estimate the durability of their improvements.
* Although there is a standardized protocol for a series of ten sessions of SI - the Rolfing Ten Series™ - it does allow for some variation in technique. That may have resulted in variations in Dr. James' treatment of some patients. In addition, practitioners trained in SI at institutions other than the Dr. Ida Rolf Institute® are in some cases taught different treatment protocols. For that reason, SI treatment as delivered by other practitioners might produce different outcomes.
* This study did not include a comparison between changes observed in patients treated with SI and changes in other patients who received a different kind of treatment. The absence of such a comparison means there was no way to confirm that the improvements found in patients treated with SI did not occur spontaneously due to the passage of time, or were caused by lifestyle changes or placebo effects.

Conclusions

* The strong clinical and statistical significance of these findings and this study's other strengths suggest that SI might effectively improve postural, breathing and knee and hip mobility in the general population.
* That suggestion needs to be confirmed by further studies designed to compare the effects of SI to those of other therapies, to spontaneous improvements that might occur with the passage of time, and to placebo treatments designed to have no physical effect but which might produce similar changes due to the patients' belief that they were actually effective. Assessing the possible contribution of those factors is a standard requirement for establishing the effectiveness of any new therapy. Such studies would require significant funding.

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