facts we cited are "wrong." nor has he told us what the correct facts are. He argues that the incidence of lumbosacral lists is insignificant, yet he names the scientific list as an acceptable clinical sign, along with forward flexion of 20 degrees and a positive straight leg raise. Mr. Fernando has not provided the "scientific" facts to support his claim that the treatments proposed for lateral shift are incorrect. We agree with Mr. Fernando that although the treatments proposed by McKenzie, Natchev, and Saunders for patients with a relevant lateral lumbar shift have been the focus of some descriptive work in the literature,13-17 scientific studies should be carried out. The first step in scientifically studying the treatment approaches used for lateral lumbar shift is to clearly identify the patients for whom the proposed treatments are purported to be most beneficial. Differentiating trunk list as a single sign from lateral lumbar shift as a treatment category is paramount in this decision-making process.

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References


Statistical Significance and Publication

To the Editor:

I am writing in connection with the Editor’s Note “Much Ado About Probability” (Physical Therapy, September 1990), with which I entirely concur in opinion. There appears to be a mysticism surrounding the P value, which removes it to some incomprehensible state of apparently infinite value (regardless of the matter to which it refers), so that when reading or reviewing a paper, we experience a tempting tendency to say, “Oh, but it’s significant.” This is not a tendency peculiar to the United States, nor does it affect only physical therapists as a group. There would appear to be a certain division between what is sensible and what is statistical, and we must beware of the fallacy of falling for apparently “meaningful” statistical results.

I feel it is a shame that more papers with non-statistically significant results are not published. Not only does this encourage the authors (and often, consequently, the readers) of papers to search for statistical significance, but it also diminishes our potential for assessing those research projects in which the null hypothesis has not been rejected. Perhaps such papers are not submitted? Or does the P value influence publication decisions?

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[Editor’s Note: Ms Gregg’s comments on the September Editor’s Note are much appreciated. She shares, however, a common misconception about the relationship of statistical significance and the fitness of a paper for publication. Results that do not reach statistical significance can be of value if they help us understand phenomena. We have no policy precluding the publication of papers in which there is a failure to reject the null hypothesis. The confusion may arise out of a more complex dilemma we face with many articles. A result may not achieve statistical significance and the null hypothesis may not be rejected because the alternative hypothesis was dubious in the first place. In this case, we might question the relevance of an article, not merely because the results did not achieve significance, but because they did not add anything to our body of knowledge. Reviewers and editors are always wary of papers that set about to knock down “straw men,” such as attempts to design primarily for the purpose of being broken apart. In addition, because so many of our papers have small numbers of subjects, the problem of a type II statistical error must always be considered when the null hypothesis is not rejected.

Here are some caveats for any authors submitting papers with statistically non-significant findings. Be sure that you have (1) justified your study, (2) made a case as to why your alternative hypothesis was viable before you collected data, and (3) addressed the possibility of a type II statistical error. We welcome submissions of good research and maintain no bias about the need to have positive findings.]

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