Errors in Statistics Could Lead to Misinterpretation

In reviewing "The Use of Low-Load Prolonged Stretch Devices in Rehabilitation Programs in the Pacific Northwest" by Nuismer, Ekes, and Holm (AjOT, July/August 1997, pp. 538-543), I found several notable errors in the results. For example, when computing statistics for change in range of motion (ROM), a zero was mistakenly used instead of the previously published statistics.

Also note that the standard deviation of age for all subjects should be 22.5 years and not 24.5 years (Table 2, p. 541). Although these mistakes only have a minimal effect on the change in the statistics, the potential for misinterpretation is present. For example, for the neurological group, the 95% confidence interval for the change in ROM is correctly (0.5, 45). The interval width is considerable, and one could not even say that the change is significantly more than 10°. However, by using the reported incorrect standard deviation, the 95% confidence interval would be calculated as (12, 45), indicating that a change in ROM is significantly more than 10°.

Roseann Hamby
Jackson, Mississippi

Authors' Response

Thank you for noticing the errors, which had gone unnoticed by the authors. Errors were due to duplicate files with the same name, and the uncorrected file had been used. Fortunately, the findings remain the same. Although we did not use confidence intervals, the population mean would fall within the corrected confidence interval. Because statistical significance does not mean clinical significance, we were not satisfied with the numbers (e.g., you suggested 10° range of motion), and that is why we chose to gather data on functional change, which was both statistically and clinically significant.

Barbara A. Nuismer, MOT, OTR/L
Ann M. Ekes, MEd, PT
Tacoma, Washington
Margo B. Holm, PhD, OTR/L, FAOTA
Pittsburgh, Pennsylvania

Focus on Occupation Is Much Needed

I would like to commend you for devoting an entire issue (AjOT, May 1998) to occupation-centered practice and education. As a current graduate student in a basic professional occupational therapy program, I find this topic to be consequential and important to address. I began school without clearly understanding why we were called therapists of "occupation" and how unique the profession of occupational therapy was. If students are not taught what occupation is and how it relates to our role in the health care system, how is the profession to maintain this uniqueness?

The responsibility for educating occupational therapy students does not fall solely on faculty in academic settings. I learned about the use of meaningful and purposeful activities in the classroom, only to find occupational therapists in clinical settings simply using range of motion exercises or applying ultrasound. How are these interventions examples of occupation-centered practice? Clinical supervisors of fieldwork students must be cognizant of how they are socializing occupational therapy students to become occupational therapists. Will they be occupation-centered practitioners or technicians?

Elizabeth Yerxa in "Occupation: The Keystone of a Curriculum for a Self-Defined Profession" (pp. 365–372) offered two scenarios illustrating possible futures for the profession. Her scenarios indicate how important it is for occupational therapy to market its uniqueness. Schultz and Schkade (1992) defined occupation as those activities in which the individual has active involvement, experiences, and personal meaning and engages in a process that yields either a tangible or an intangible product. This definition should be familiar to all practitioners and educators. We need to make everyone, consumers and professional colleagues alike, aware of what we do and what we have to offer. This issue of AjOT dedicated to occupation-centered practice and education reminds us of what we have to offer and the risks of losing sight of "occupation."

Barbara Green
Baltimore, Maryland

Reference


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Table 1

Corrected Statistics of Table 2 in Nuismer, Ekes, and Holm (1997, p. 541)

<table>
<thead>
<tr>
<th>Group</th>
<th>Range of Motion (Degrees)</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>Neurologic</td>
<td>27.40 (28.40)</td>
<td>24.97 (26.78)</td>
<td>3.47</td>
</tr>
<tr>
<td>All subjects</td>
<td>28.06 (28.61)</td>
<td>23.28 (24.31)</td>
<td>5.11 (4.99)</td>
</tr>
</tbody>
</table>

Note. The reported statistics are shown in parentheses for comparison purposes.

*Due to other mistakes.