LETTERS TO THE EDITOR

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Shift work and chronic disease: the epidemiological evidence

Dear Sir,

Wang et al. [1] performed a literature search using a single search engine and assessed the strength of the evidence with ‘the modified Royal College of General Practitioners (RCGP) three-star system’ attributed to a 2000 review [2].

The RCGP three-star system was first published in 1995 [3]. In 2001, Waddell and Burton [2] broadly followed the RCGP guidelines as modified by the Swedish Council on Health Technology Assessment (SBU) and added a fourth category. In its contemporaneous and most commonly used format dating to 2005, the SBU modified three-star system has five categories and awards stars on a significantly different basis compared to the 2000 version [2]. The current version of the modified three-star system can be accessed in any SBU report including the referenced example [4]. The two versions are compared in Table 1 below. There is a plethora of grading systems making it difficult for guideline developers to choose which system to adopt [5]. However, when selecting one, it is important to use the version most commonly used in current practice.

The authors of this ‘in-depth review’ used a single search engine. According to the Cochrane Collaboration, a ‘quick and dirty’ search of, for example MEDLINE, is generally not considered adequate [6]. Studies showed that only 30–80% of all known published randomized controlled trials were identifiable using MEDLINE (depending on the area or specific question) [7]. Waddell and Burton [2] used MEDLINE, EMBASE and additional searching. The British Occupational Health Research Foundation and the Health and Work Development Unit (HWDU) (formerly the Occupational Health Clinical Effectiveness Unit) use the same two search engines along with additional searching and additionally CINAHL in the case of the HWDU.

I would be interested to know if the authors consider that the use of only one search engine might have introduced selection bias and whether the grading of the evidence against a superseded grading system might have affected their results.

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References


Table 1. Comparison of three star tables derived from 1995 RCGP system

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<tbody>
<tr>
<td>***Strong evidence</td>
<td>Provided by generally consistent findings in multiple, high quality scientific studies.</td>
<td>Corroborated by at least two independent studies with high quality, or a good systematic review.</td>
</tr>
<tr>
<td>**Moderate evidence</td>
<td>Provided by generally consistent findings in fewer, smaller or lower quality scientific studies.</td>
<td>Corroborated by one study with high quality and at least two studies with medium quality.</td>
</tr>
<tr>
<td>*Limited or contradictory evidence</td>
<td>Provided by one scientific study or inconsistent findings in multiple scientific studies.</td>
<td>Not used.</td>
</tr>
<tr>
<td>*Limited evidence</td>
<td>Not used.</td>
<td>Corroborated by at least two studies with medium quality.</td>
</tr>
<tr>
<td>No scientific evidence</td>
<td>Based on clinical studies, theoretical considerations and/or clinical consensus.</td>
<td>Not used.</td>
</tr>
<tr>
<td>Insufficient</td>
<td>Not used.</td>
<td>No conclusions can be drawn when there are not any studies that meet the criteria for quality.</td>
</tr>
<tr>
<td>Contradictory</td>
<td>Not used.</td>
<td>No conclusions can be drawn when there are studies with the same quality whose finding contradict one another.</td>
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