

from cognitively healthy controls with the highest accuracy was the Recall of Pictures Test (RPT), particularly the delayed recall task.<sup>1,2</sup> According to Araujo et al.,<sup>1</sup> this test is “similar to a test from the Brief Cognitive Screening Battery (BCSB),<sup>3</sup> except that color pictures are used.” The reason given for using color pictures instead of black and white line drawings was that color information “can improve the recognition of pictures in illiterate and less schooled individuals.”<sup>2</sup>

Since we first published the BCSB in 1994,<sup>4</sup> our group conducted many studies involving this instrument. According to several studies by our and other groups in Brazil and abroad, identifying black and white line drawings is extremely easy for low-educated or even illiterate individuals. Of note, a study conducted on riverbanks in the Amazon basin found a median of 10 out of 10 drawings identified when evaluating 163 individuals with a mean of 0.83 years of education ( $\pm 1.55$ ), 110 of whom were illiterate.<sup>5</sup>

It is also remarkable that the figures in the BCSB and RPT are identical (except for the bucket, which was replaced with a trash can). In addition, the testing procedures of the RPT are exactly the same as those in the BCSB memory test: naming, incidental memory, immediate memory, learning, delayed recall and recognition. Therefore, in our view, the RPT is a color version of the BCSB memory test, and, as such, the original authors should be credited. Nevertheless, this test received a different name in the European battery, and the papers and names of the BCSB’s authors, who in fact designed this battery for use with low-educated individuals, are rarely mentioned. The first paper by Nitrini et al.,<sup>4</sup> which describes the BCSB, was never cited by the authors of the CNTB.

We must also point out that we have never precluded the use of the BCSB by other researchers or clinicians, and the test has always been freely available. In fact, we have encouraged its use because we believe it is a powerful tool for dementia diagnosis in low-educated individuals. However, we never imagined that it would be used without due recognition that we designed and presented it to the clinical and scientific community.

As we close, we strongly suggest that the authors of the CNTB publicly recognize that the RPT is the color version of the BCSB memory test created by Nitrini et al. in 1994 and not a new or similar test.

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## Disclosure

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# Recall of Pictures Test included in the European Cross-Cultural Neuropsychological Test Battery

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In response our recent paper titled “Brazilian version of the European Cross-Cultural Neuropsychological Test Battery,”<sup>1</sup> Nitrini et al. argue that the Recall of Pictures Test (RPT) is “the color version of the Brief Cognitive Screening Battery (BCSB) memory test”<sup>2</sup> and claim that Nielsen et al.<sup>3</sup> have not given due credit to the original authors of the BCSB memory test.

The RPT was developed for cross-cultural cognitive assessment of minority ethnic groups in Europe and has been used for this purpose since its first publication in 2012.<sup>3</sup> The RPT has subsequently been part of several European publications on the European Cross-Cultural Neuropsychological Test Battery (CNTB). Since the initial study validating the RPT, Nitrini et al.<sup>4</sup> have been consistently cited. The initial paper explicitly states that the RPT is inspired by the BCSB memory test and their work. However, other test paradigms relying on learning and recall of pictures also formed the background for pursuing this approach to the RPT.

**Table 1** Comparison of design, procedures and measures of the Brief Cognitive Screening Battery memory test and the Recall of Pictures Test

	Brief Cognitive Screening Battery memory test	Recall of Pictures Test
Design		
Naming and learning	<ul style="list-style-type: none"> <li>• 10 black and white drawings (shoe, house, comb, key, airplane, bucket, turtle, book, spoon, tree)</li> <li>• Mixed on a standing page</li> </ul>	<ul style="list-style-type: none"> <li>• 10 colored Snodgrass and Vanderwart pictures (shoe, spoon, comb, tree, turtle, key, airplane, house, book, <b>trash can</b>)</li> <li>• Organized in two rows on a flat page</li> </ul>
Recognition	<ul style="list-style-type: none"> <li>• 20 black and white drawings (distractors: truck, iron, fruit, leaf, kettle, bicycle, banana, ship, pig, suit jacket)</li> <li>• Organized in 5 rows on a standing page</li> </ul>	<ul style="list-style-type: none"> <li>• 20 colored Snodgrass and Vanderwart pictures (distractors: bicycle, <b>broom, chicken, foot, scissors, train, umbrella, wristwatch, chair, flower</b>)</li> <li>• <b>Organized in 4 rows on a flat page</b></li> </ul>
Procedures		
Naming	<ul style="list-style-type: none"> <li>• Naming of the 10 drawings</li> </ul>	<ul style="list-style-type: none"> <li>• Naming of the 10 pictures</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Incidental learning trial followed by two explicit learning trials</li> <li>• Maximum 30 seconds to memorize drawings</li> <li>• Maximum 60 seconds to retrieve drawings</li> <li>• No explicit warning about delayed recall trial</li> </ul>	<ul style="list-style-type: none"> <li>• Incidental learning trial followed by two explicit learning trials</li> <li>• Maximum 30 seconds to memorize pictures</li> <li>• <b>No time constraint</b></li> <li>• <b>Explicit warning about delayed recall trial</b></li> </ul>
Delayed recall	<ul style="list-style-type: none"> <li>• Delay of approximately 5 minutes (usually after Animal Fluency and clock Drawing Test)</li> <li>• Maximum 60 seconds to retrieve drawings</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Delay of approximately 10 minutes</b> (usually after Color Trails Test and five Digit Test)</li> <li>• <b>No time constraint</b></li> </ul>
Recognition	<ul style="list-style-type: none"> <li>• Identification of 10 target drawings among 10 distractors</li> </ul>	<ul style="list-style-type: none"> <li>• Identification of 10 target pictures among 10 distractors</li> </ul>
Measures		
Naming	<ul style="list-style-type: none"> <li>• Number of correctly named drawings</li> <li>• 0-10 points</li> <li>• Error types scored according to Visual perception or Naming errors.</li> </ul>	<ul style="list-style-type: none"> <li>• Number of correctly named pictures</li> <li>• 0-10 points</li> <li>• No scoring of error types</li> </ul>
Incidental Recall	<ul style="list-style-type: none"> <li>• Number of correctly recalled drawings</li> <li>• 0-10 points</li> </ul>	<ul style="list-style-type: none"> <li>• Number of correctly recalled pictures</li> <li>• 0-10 points</li> </ul>
Immediate Recall	<ul style="list-style-type: none"> <li>• Number of correctly recalled drawings</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Mean number of correctly recalled pictures across three learning trials (incidental and immediate recall trials) rounded to the nearest whole number</b></li> <li>• 0-10 points</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Number of correctly recalled drawings</li> <li>• 0-10 points</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Not part of the RPT</b></li> </ul>
Delayed Recall	<ul style="list-style-type: none"> <li>• Number of correctly recalled drawings</li> <li>• 0-10 points</li> </ul>	<ul style="list-style-type: none"> <li>• Number of correctly recalled drawings</li> <li>• 0-10 points</li> </ul>
Recognition	<ul style="list-style-type: none"> <li>• Number of correctly recognized drawings minus false positive responses.</li> <li>• 0-10 points</li> </ul>	<ul style="list-style-type: none"> <li>• Number of correctly recognized pictures minus false positive responses.</li> <li>• 0-10 points (the minimum score is 0)</li> </ul>

**Bold type indicates the main differences between the BCSB memory test and the Recall of Pictures Test. All Recall of Pictures Test materials are available upon request from the authors.**

When developing the RPT, Nielsen et al. only knew about the BCSB memory test from the international scientific literature. However, upon request Nitrini forwarded all of the BCSB memory test material, and it is only now that Nielsen et al. have had the opportunity to review this material. Although they acknowledge similarities between the two tests, Nielsen et al. also find important differences in their designs, procedures and measures (Table 1). Additionally, the wording of all the instructions differs and there are differences in administration and scoring. Thus, Nielsen et al. respectfully disagree that the RPT is simply a color version of the BCSB memory test, and Table 1 demonstrates these differences.

It is important to highlight that Nielsen et al. have no commercial interests in the RPT, which is made freely available to the international clinical and research community. In fact, Yassuda, one coauthor of the letter was given full access to all RPT materials in 2014, when she contacted Nielsen to ask permission to include the RPT and other CNTB tests in her research.

It is remarkable that Nitrini et al. argue against the suggestion that color information may improve recognition of pictures in low-educated or illiterate people. This suggestion is an old one<sup>5</sup> and has been supported by several studies, including two by one of the signers of the letter.<sup>6,7</sup> Interestingly, Ortega et al.<sup>6</sup> directly compared tests included in the BCSB and the CNTB and stated that “data from the present study suggest that the use of colored stimuli seems to be a relevant strategy in the evaluation of memory among people with low schooling, as they may facilitate encoding.” It is noteworthy, that the name of the RPT was changed to the “Colored Figure Memory Test” in this publication.

We have the deepest respect for Nitrini et al., their excellent and longstanding commitment to improving cognitive assessment in low-educated and illiterate populations, and for introducing the test paradigm used in the BCSB memory test. There is no doubt that the RPT was inspired by Nitrini et al.’s seminal study, and this has always been recognized by Nielsen et al.

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## Urging caution regarding the generalizability of the Medical Student Stress Factor Scale: a medical student perspective

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We read with great interest the article entitled “The root of the problem: identifying major sources of stress in Brazilian medical students and developing the Medical Student Stress Factor Scale” by Damiano et al., recently published in the *Brazilian Journal of Psychiatry*.<sup>1</sup>

As medical students ourselves, we believe this paper raises an important awareness of the mental health crisis that appears to be spreading amongst medical students internationally.<sup>2</sup> In some regards it is unsurprising that medical students are at heightened risk of mental health issues. Here in the United Kingdom, as is the case in most countries, students begin medical education in their late teenage years/early twenties, where they are exposed to high-intensity education, fierce academic competition, and patient suffering/death, often without the necessary coping strategies to deal with such stressors.<sup>3</sup> We