

Are current handwriting assessments sufficiently sensitive in identifying middle-school students with handwriting difficulties?

Naomi Weintraub¹, Hagit Wolfson², Orit Lahav³

¹*School of Occupational Therapy of Hadassah and the Hebrew University, Jerusalem, Israel,* ²*Ministry of Education, Petah Tikva, Israel,* ³*Occupational Therapy Department, Faculty of Health Professions, Ono Academic College, Kiryat Ono, Israel*

Introduction: Writing is an important skill, which is essential for participation in a variety of school based activities. As school-years progress, students are expected to write longer passages, over extended periods of time. At present, however, existing handwriting assessment tools consist of only brief writing tasks. Therefore, the question arises whether such tools are sensitive enough in identifying students with handwriting difficulties.

Study objectives: (a) To examine the effects of prolonged writing on students' handwriting legibility and speed and if this effect differs within genders and grade levels and (b) to examine the sensitivity of a handwriting assessment tool in identifying students with hand writing difficulties, at different writing periods (i.e., 1, 4 and 10 minutes).

Methods: The study included 307 (47.6% males) students in grades 7-9 from 13 schools in Israel. The students were administered the Handwriting Assessment for Middle School (HAMS), which has a high ecological validity as it includes various writing tasks and is administered within a classroom setting. This study relates to the 10 minute copying task of the HAMS, which is scored for speed (at 1, 4 and 10 minutes) and legibility (at 4 and 10 minutes).

Results: The study findings revealed that students' speed and legibility decreased over the 10-minute writing period. This decline was not linear, and varied between the different grade-levels and genders. In addition, on average, only 30-50% of the students with difficulties in speed and/or legibility were identified based on their writing performance at 1 or 4 minutes.

Conclusions: It appears that for both genders and at the different grade levels of middle school, handwriting assessment should include a writing task of an extended period of time (at least 10 minutes) in order for it to be sufficiently sensitive in identifying students with handwriting difficulties.

Contribution: This study emphasizes the need for occupational therapists to employ ecologically valid and sensitive assessments in order to increase their accuracy in identifying students with handwriting difficulties.