

New Zealand Race/Ethnicity Equivalence of the HPI, HDS, and MVPI

Test fairness is critical for any selection tool. We examine test fairness by conducting differential item functioning (DIF) and differential test functioning (DTF) analyses. DIF and DTF occur when an item or scale, respectively, behaves differently for different groups of people, even for people with the same level of a given personality characteristic. Both DIF and DTF are worth examining because they can lead to systematic test score differences due to group membership rather than personality (or values or cognitive ability). For the HPI and HDS we found 1 (<1%) and 2 (<1%) of the comparisons respectively demonstrated moderate level DIF. For the MVPI, we found 16 comparisons (4% of comparisons) showed moderate DIF. These comparisons, however, may benefit either the Asian, Māori or the European group. There is no differential functioning at the scale level. We find our assessments show little evidence of DIF or DTF—with item and test score differences less than 1%, on average—due to race/ethnicity. These results indicate the Hogan Personality Inventory (HPI), Hogan Developmental Survey (HDS), and the Motives, Values, Preferences Inventory (MVPI) are fair tests for all races/ethnicities examined.

Sample Sizes for Equivalence Analyses

Race/Ethnicity	HPI	HDS	MVPI
Asian	834	556	521
Māori	805	583	554
European	6,400	5,263	5,097

Note. We compare Asian and Māori groups to the European group in our analyses.

HPI

- 182 items and 7 scales tested
- 365 comparisons (99%) show negligible or slight DIF
- All scales show negligible DTF for the two races/ethnicities

HDS

- 154 items and 11 scales tested
- 306 comparisons (99%) show negligible or slight DIF
- All scales show negligible DTF for the two races/ethnicities

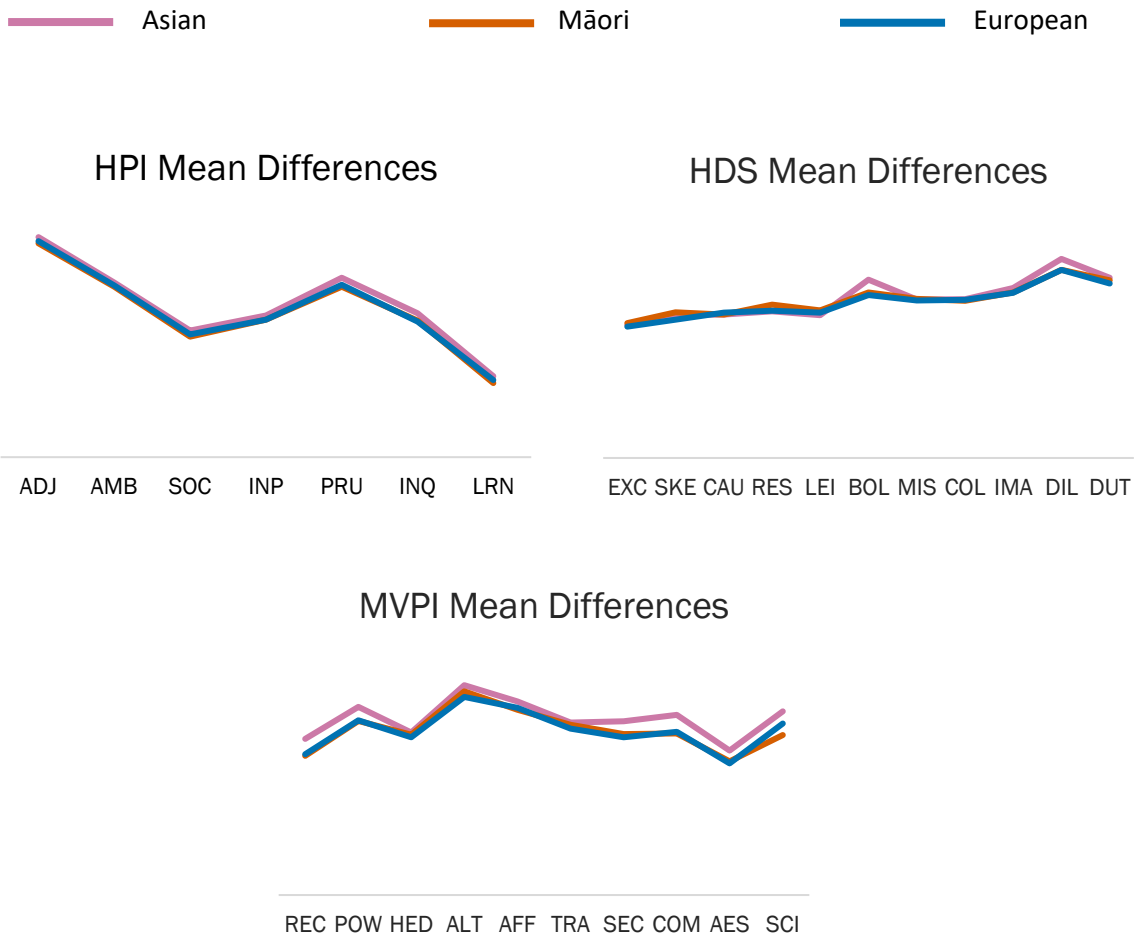
MVPI

- 200 items and 10 scales tested
- 384 comparisons (96%) show negligible or slight DIF
- All scales show negligible DTF for the two races/ethnicities

Scores Differences by Racial/Ethnic Group

Many clients ask if we see differences in personality and values scores for various groups. Our research indicates that, although statistically significant differences do exist, we find no large (Cohen's $d > .80$) differences between races/ethnicities.

Mean Differences



References

Hogan Assessment Systems. (2023a). *Item equivalency of the Hogan Personality Inventory, Hogan Development Survey, and the Motives, Values, Preferences Inventory for Asian New Zealanders.*

Hogan Assessment Systems. (2023b). *Item equivalency of the Hogan Personality Inventory, Hogan Development Survey, and the Motives, Values, Preferences Inventory for Māori New Zealanders.*