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HUMAN RESOURCES

ARMED SERVICES VOCATIONAL APTITUDE BATTERY (ASVAB): ANALYSES OF DIFFERENTIAL ITEM FUNCTIONING ON FORMS 15, 16, AND 17

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13. ABSTRACT (Maximum 200 words) This study reports the analyses of item-level data from the Initial Operational Test and Evaluation (IOT&E) of the Armed Services Vocational Aptitude Battery (ASVAB) Forms 15, 16, and 17 in order to investigate the occurrence of differential item functioning (DIF) on power subtests of the ASVAB, and to examine the effects of sample size on five indices of DIF. This study used the Camilli's Full Chi-Square, the Mantel-Haenszel Chi-Square and Odds Ratio, Lord's Chi-Square, and the Modified Sum-of-Squares as indices of DIF. The results of this study indicate that ASVAB Forms 15, 16, and 17 power subtest items are relatively free of DIF. The General Science subtest tended to have the most DIF items, and DIF items tended to occur more often with gender comparisons, although the occurrence of DIF on the Auto-Shop, Mechanical Comprehension, and Electronics information subtests was minimal. The results also indicated that all five indices were consistent for sample sizes of 500, 1,000 and 2,000. The intercorrelations between the Mantel-Haenszel Chi-Square and Odds Ratio, and the Full Chi-Square were dramatically reduced in the N + 100 sample size. The results indicated that the Mantel-Haenszel Odds Ratio should probably not be used with sample sizes of 100 cases or less.			
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