



# Adverse Impact Analysis of The Safety Quotient (SQ) Assessment

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Research Study

# Adverse Impact Analysis of the SQ **Research Study**

## Summary

Adverse Impact is defined by the Uniform Guidelines of Employee Selection Procedures (UGESP) as the ratio between selection rate of any “race, sex, or ethnic group which is less than four-fifths (4/5) (or eighty percent) of the rate for the group with the highest rate...” If the ratio is equal to or below .80 (i.e., 4/5’s rule), there is evidence for adverse impact.

Neither statistically significant group mean differences nor Adverse Impact is evident on Safety Quotient (SQ) scales or Overall SQ scale.

1. Mean differences across subgroups (Gender, Race/Ethnicity) on SQ scales do not indicate Adverse Impact and are not statistically significant.
2. There is no evidence of Adverse Impact from using the SQ as selection criteria for the job families of Craft Workers, Operatives, and Laborers and Helpers, the intended job types for the SQ assessment.

The SQ has not demonstrated Adverse Impact to date and no claims of unfair employment discrimination have resulted from an employer’s use of the SQ. By following the recommended steps for using the SQ, there is no reason to anticipate Adverse Impact.

# Analysis of Adverse Impact for the Safety Quotient (SQ)

## Defining Adverse Impact

Adverse Impact is clearly defined in existing law and professional guidelines under the Uniform Guidelines of Employee Selection Procedures (UGESP). When Adverse Impact results from a selection procedure, that procedure must be validated in accordance with the UGESP. **An employer is not required to conduct validity studies of selection procedures where no Adverse Impact results. Nevertheless, best professional practice encourages validation studies and the use of valid selection tests.**

## Group Mean Differences on the SQ

### Race/Ethnicity Differences

Analysis of variance (ANOVA) yielded no statistically significant mean differences exist for any of the SQ scales or the overall SQ scale between the White group and any other race/ethnicity group in the SQ normative sample: Hispanic or Latino, Black or African American (Not Hispanic or Latino), Asian (Not Hispanic or Latino), American Indian or Alaska Native (Not Hispanic or Latino).

Sample size (N=2377) for this analysis provided an appropriate level of statistical power to detect differences. Homogeneity of variance tests indicated that **no significant mean differences exist between the White group and any other race group in the sample.**

### Gender Differences

Analysis of variance was performed to determine whether the genders differed significantly from one another on each scale. It yielded no statistically significant mean differences exist for any of the SQ scales or the overall SQ scale between Males and Females in the SQ normative sample: sample size (N=2377) for this analysis provided an appropriate level of statistical power to detect differences. Homogeneity of variance tests indicated that the **variances for females and males were not statistically different on any scale.**



## Adverse Impact Analysis in the Use of the SQ for Selection

Based on the 80% (4/5's) rule described in the UGESP, these findings suggest that the recommended SQ selection criteria used for selecting employees in the job families of Craft Workers, Operatives, and Laborers and Helpers will not result in Adverse Impact against any group.

TalentClick evaluated selection rates for the various gender and race/ethnic groups using the SQ normative sample (N = 2,377). The effects of the recommended selection criteria or "preferred score ranges" for the job families of Craft Workers, Operatives, and Laborers and Helpers within the SQ normative sample were calculated by demographic group, in which males and Whites are the majority groups. Based on the 80% (4/5's) rule described in the UGESP, these findings suggest that **the recommended "preferred score ranges" used for selecting employees in these job families will not result in Adverse Impact against any race/ethnic or gender group.**

