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Why Do We Analyze Assessment Scores?

Assessment scores are analyzed for several reasons. One reason is to evaluate the effectiveness of the assessment. Did everyone pass the assessment, or did everyone fail? Was there a good distribution of scores or were most scores clustered in one spot? Assessments that result in little scoring variation may not be as effective as we would hope because they don't help distinguish qualified applicants from unqualified applicants (or more qualified applicants from less qualified applicants).

Another reason is to evaluate the rater reliability or consistency (when multiple raters are used). Did raters have a high level of agreement and consistency for the most part or was there a lot of variation? If there was a lot of variation, can the assessment criteria be revised to help ensure consistency?

A third reason is to evaluate whether the assessment scores show evidence of adverse impact (or relatively disproportionate pass rates) on a group protected by equal employment opportunity legislation (such as racial & ethnic minorities and females). Did one group score significantly higher or lower than another? If so, why might that be? Are there alternative approaches that could be taken that would be fairer for all groups?

The information obtained through score analysis will help you determine if the assessment or selection procedure is effective as is, or if revisions should be made to improve it.

More information about the why behind conducting analysis of scores is available in the [Wisconsin Human Resource Handbook Chapter 202: Statistical and Reliability Analysis](#). More information about adverse impact is available in the [Uniform Guidelines on Employee Selection Procedures](#).

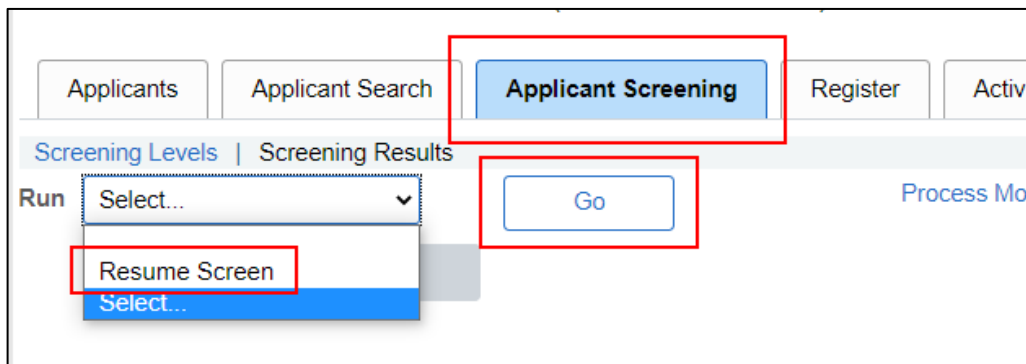
How & When Do We Analyze Scores?

There are two tools available to help analyze assessment scores: the Rated Score Analysis Spreadsheet and the Revised SHRM Adverse Impact Calculation Spreadsheet. These should be used when the final screening level in a job opening (the screening level that determines the Civil Service Score) is a Manual Screening or a Resume Screening. Manual Screenings may include Open Ended Question Screening, licensure/certification reviews, etc. Only applicants who completed the final screening should be included in the score analysis.

The Rated Score Analysis Spreadsheet should be used to analyze results of numerically scaled (i.e., not pass/fail) resume screens and rated open-ended questions (e.g., Training & Experience assessments), provided they include multiple raters.

The Revised SHRM Adverse Impact Calculation Spreadsheet should be used for pass/fail and single-rater assessments.

Scores should be analyzed using these two tools AFTER running the final screening level of the job opening. For example, if there is a resume screen, run the Resume Screen after all scores have been entered. See the [Running a Manual Screen job aid](#) for more information about running a manual screen. See the [Running a Resume Screen job aid](#) for more information about running a resume screen. You must have the screening results on the job opening prior to analyzing scores.



Did you run the final screening level of the job opening?

Screening Results must be available BEFORE analyzing scores.

Contact the [Bureau of Merit, Recruitment and Selection \(BMRS\)](#) if you have any questions regarding analyzing pre-hire assessment scores and results.

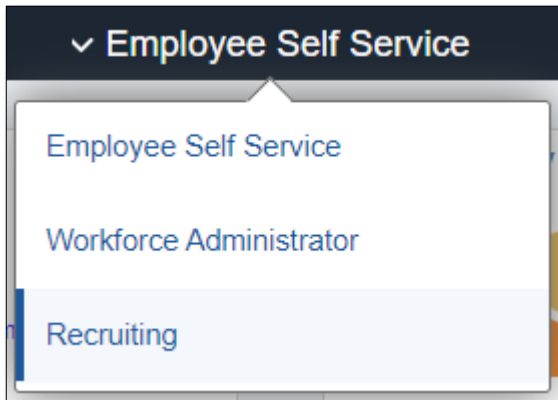
Exporting Scores for Score Analysis

You need to export scores using the score extract built into Recruiting Solutions/TAM (also called the Score Analysis Report or Rating Analysis Extract) before you can analyze scores using one of the two aforementioned tools. The score exports from Recruiting Solutions/TAM are essentially structured in the same way as score exports from legacy Wisc.Jobs to accommodate use with the Rated Score Analysis Spreadsheet.

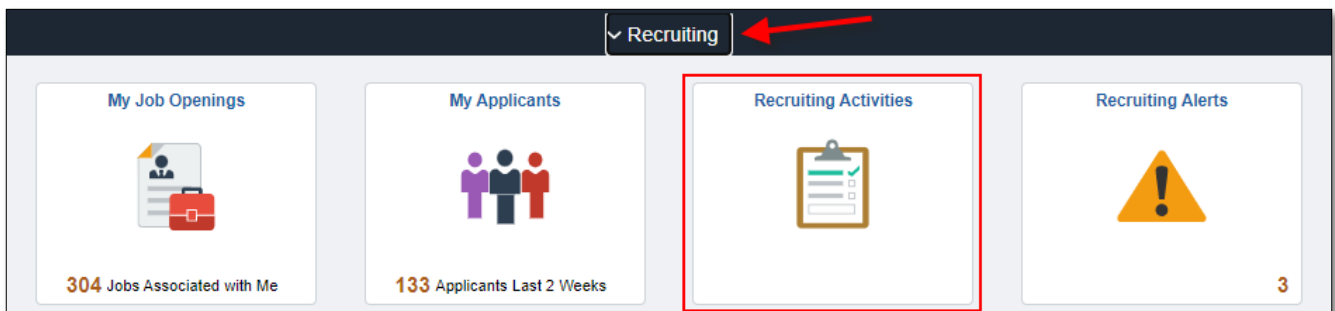
There are two ways to export scores from Recruiting Solutions/TAM. Follow the steps below to export scores.

Export Scores – Method 1

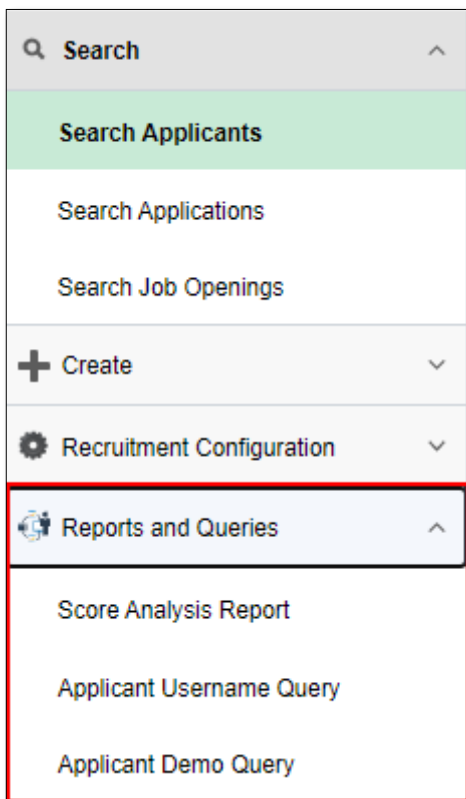
1. Click on the dropdown menu on the navigation bar and select **Recruiting**



2. Click on the **Recruiting Activities Tile**



3. Click on the **Reports and Queries** dropdown on the navigation menu on the left side of the screen



4. Click on the **Score Analysis Report**
5. Enter the **Job Opening ID**.

*Job Opening ID 1073 Procurement Specialist - 2 Vacancies!

*Screening ID

*Export Type Resume Screening Create

6. Select the **Screening ID** (all screening types associated with the job will display – select the screening level that will be determining the Civil Service Score) – this will be either a Manual Screening or a Resume Screening.

*Job Opening ID 1073 Procurement Specialist - 2 Vacancies!

*Screening ID 2003 Resume Screen

*Export Type Resume Screening Create

7. Confirm the **Export Type** is correct based on the screening.
 - a. If a resume screen, select Resume Screening
 - b. If a manual screening with an open-ended question is determining the CSS, select Open Ended Question Screening

*Job Opening ID 1073 Procurement Specialist - 2 Vacancies!

*Screening ID 2003 Resume Screen

*Export Type Resume Screening Create

- Non-Rated Screening
- Open Ended Question Screening
- Resume Screening

8. Click **Create**.
9. An Excel file will be created. Click on the file to save locally and use to populate the Rated Score Analysis Spreadsheet.

Note: Everyone has a Rank of 1 on the spreadsheet – disregard this field.

Export Scores – Method 2

1. Go to **Navigator Icon**



2. Navigate to **State of Wisconsin (STAR) > Recruiting > Reports > Score Analysis Report**. You will be brought to this page:

Rating Analysis Extract

*Job Opening ID

*Screening ID

*Export Type

3. Enter the **Job Opening ID**.

*Job Opening ID Procurement Specialist - 2 Vacancies!

*Screening ID

*Export Type

4. Select the **Screening ID** (all screening types associated with the job will display – select the screening level that will be determining the Civil Service Score) – this will be either a Manual Screening or a Resume Screening.

*Job Opening ID Procurement Specialist - 2 Vacancies!

*Screening ID Resume Screen

*Export Type

5. Confirm the **Export Type** is correct based on the screening.
 - a. If a resume screen, select Resume Screening
 - b. If a manual screening with an open-ended question is determining the CSS, select Open Ended Question Screening

The screenshot shows a web interface for creating a score analysis spreadsheet. It includes three main input areas:

- *Job Opening ID:** A search box containing '1073' with a magnifying glass icon and a dropdown showing 'Procurement Specialist - 2 Vacancies!'.
- *Screening ID:** A search box containing '2003' with a magnifying glass icon and a dropdown showing 'Resume Screen'.
- *Export Type:** A dropdown menu with 'Resume Screening' selected. Other options include 'Non-Rated Screening' and 'Open Ended Question Screening'. A blue 'Create' button is positioned to the right of the dropdown.

6. Click **Create**.
7. An Excel file will be created. Click on the file to save locally and use to populate the Rated Score Analysis Spreadsheet.

Note: Everyone has a Rank of 1 on the spreadsheet – disregard this field.

Accessing and Using the Rated Score Analysis Spreadsheet

Recruiters should use the Rated Score Analysis Spreadsheet to analyze results of resume screens and rated open-ended questions (e.g., Training & Experience assessments), provided they are numerically scaled (i.e., NOT pass/fail) and include multiple raters. See the [instructions for Accessing and Using the Revised SHRM Adverse Impact Calculation Spreadsheet](#) for analyzing results of pass/fail and single-rater assessments.



Did you use a numerically scaled resume screen or rated open-ended questions with multiple raters?

Use the [Rated Score Analysis Spreadsheet](#) to analyze results of numerically scaled resume screens or rated open-ended questions with multiple raters.

The rated score analysis spreadsheet functions essentially the same way as it has previously. You can access the [Rated Score Analysis Spreadsheet \(updated for TAM\)](#) on the [Recruiting Solutions Implementation site](#). Note the rated score analysis spreadsheet in legacy Wisc.Jobs should not be used for recruitments conducted in Recruiting Solutions/TAM as additional race/ethnicity codes have been added.

Recruiters may also refer to the [Legacy Wisc.Jobs Rated Score Analysis Job Aid](#) if need be.

Revisions to the Rated Score Analysis Spreadsheet

Minimal revisions were made to the rated score analysis spreadsheet to accommodate changes to race/ethnicity data collection in Recruiting Solutions/TAM.

Below is an example of how race/ethnicity is captured in external job postings in Recruiting Solutions/TAM (internal candidates do not provide this information since it is already in PeopleSoft):

Ethnicity and Race Identification

Are you Hispanic or Latino? Definition

Yes, I am Hispanic or Latino.

No, I am not Hispanic or Latino.

What is your race? Select one or more. Definition

American Indian or Alaska Native

Asian

Black or African American

Native Hawaiian or Pacific Islander

White

I decline to answer

The corresponding revisions to the rated score analysis spreadsheet are visible in the PPAdvlmt worksheet:

Adverse Impact Analysis for									
Title									
Passing Point Impact Analysis for Minorities					Score Stats		Race/Ethnicity	# of Applicants	Adverse Impact?
Ethnic Code	Pass	%	Fail	%	Average	SD			
1	0	0.00%	1	100.00%	8.000		Black or African American	1	Yes
2	0	0.00%	1	100.00%	13.333		Asian	1	Yes
3	0	0.00%	1	100.00%	8.000		American Indian or Alaska Native	1	Yes
4	0	0.00%	1	100.00%	15.333		Hispanic or Latino	1	Yes
5	1	33.33%	2	66.67%	14.444	6.931	White	3	
6	0		0				Native Hawaiian or Pacific Islander	0	
7	0		0				Two or More Races	0	
9	0		0				Not Specified	0	
Total	1	14.29%	6	85.71%	12.571	5.1088	Total	7	
All Minorities	0	0.00%	4	100.00%	11.167	3.747	All Minorities	4	Yes
80% Rule	26.67%								
Probability that the difference between Minority & White (5) score averages is due to chance = 0.51									
Fisher's Exact Test is not significant at 0.429									
The Z test of the difference in passing rates is significant at the .05 probability level: -5.093									
Passing Point Impact Analysis for Females					Score Stats		Gender	# of Applicants	Adverse Impact?
Gender	Pass	%	Fail	%	Average	SD			
M	1	33.33%	2	66.67%	13.222	7.919	Male	3	
F	0	0.00%	4	100.00%	12.083	3.108	Female	4	Yes
U	0		0				Not Specified	0	
Total	1	14.29%	6	85.71%	12.571	5.1088	Total	7	
80% Rule	26.67%								
Probability that the difference between Male & Female score averages is due to chance = 0.83									
Fisher's Exact Test is significant at 0.000									
The Z test of the difference in passing rates is significant at the .05 probability level: -5.093									

Three columns were added:

- Column J – Race/Ethnicity: This shows the race/ethnicity categories/labels for the corresponding numerical codes.
- Column K – # of Applicants: This shows the total number of applicants who passed and failed for each race/ethnicity category.
- Column L – Adverse Impact?: This shows any indication of adverse impact against each race/ethnicity category. The cells are highlighted in red and show “Yes” when adverse impact is indicated. The cells are blank when adverse impact is not indicated. Note this column does not consider sample size.

Accessing and Using the Revised SHRM Adverse Impact Calculator Spreadsheet

Recruiters should use the Revised SHRM Adverse Impact Calculator Spreadsheet to analyze results of pass/fail and single-rater assessments. The Revised SHRM Adverse Impact Calculator Spreadsheet can also be used to analyze results of post-certification assessments conducted offline or outside of TAM (no TAM score export needed). You can access the [Revised SHRM Adverse Impact Calculator Spreadsheet](#) on the [Recruiting Solutions Implementation site](#).



Did you use a pass/fail or single-rater assessment?

Use the [Revised SHRM Adverse Impact Calculator Spreadsheet](#) to analyze results of pass/fail or single-rater assessments.

The Revised SHRM Adverse Impact Calculator Spreadsheet requires entering data about the number of applicants and the number of applicants who passed the assessment to function, and then the results are updated automatically. Cells will be highlighted in red after data is entered if there is any evidence of adverse impact. Instructions are provided at the top of the spreadsheet. There are sections for race & ethnicity, gender, veteran status, and disability status. Note the sections on race & ethnicity and gender are required and the sections on veteran and disability status are recommended. For the section on race & ethnicity, the corresponding group codes as shown in the score extract from Recruiting Solutions/TAM are provided in column B. Finally, there are a few charts below the table to help visual the results after data have been entered.

Interpret Results of Score Analysis & Make Revisions as Necessary

Finally, recruiters should interpret the results of the score analysis once it has been produced. Remember, the [purpose of analyzing scores](#) is to determine whether raters are consistent with each other, whether demographic groups performed similarly (or if there is evidence of adverse impact), and whether the assessment is effective overall.

If you determine the selection procedure was effective and worked well, continue using that approach. If you determine that the selection procedure was not effective (or as effective as you would've liked), change your approach. There are many ways to change your approach. For example, you can add or remove selection criteria, identify new or different criteria to evaluate, use a different assessment type or method, or create a new assessment altogether. In summary, the goal is to monitor the effectiveness of the selection procedures and make revisions when necessary.

Contact the [Bureau of Merit, Recruitment and Selection \(BMRS\)](#) if you have any questions regarding interpreting results of a score analysis or revising a selection procedure.

File Supporting Documentation

The last step of the score analysis process is filing the documentation produced. Be sure to place a copy of the score export file and score analysis spreadsheet into the recruiting file. You may make note of your interpretation of the effectiveness of the selection procedure, including whether the selection procedure or assessment should be utilized again or if revisions are warranted. Filing the supporting documentation in the recruiting file makes the documentation available in case it needs to be referenced in the future.



✓ Check your work. Double check that you performed these steps to complete the score analysis process:

1. Run the final screening level of the job opening
2. Export scores for score analysis
3. Use the Rated Score Analysis Spreadsheet or Revised SHRM Adverse Impact Calculator Spreadsheet to analyze scores
4. Interpret Results of Score Analysis & Make Revisions as Necessary
5. File Supporting Documentation