



Overview

After the Force-wide DEOCS in Spring 2021, the Office of People Analytics reviewed DoD-wide averages for all of the DEOCS 5.0 factors. The average *Workplace Hostility* unfavorable rating for all units/organizations was 86%. This was notably high. We also heard concern from several Services about these high average ratings. Because of this, we removed *Workplace Hostility* factor ratings from all DEOCS 5.0 reports starting in May 2021 while we evaluated the most appropriate method to report results for this factor.

Based on the analysis of the data, we changed the way these ratings are calculated. As of June 2022 factor ratings for *Workplace Hostility* have been reinstated in the dashboard and PDF reports. The updated calculation method has been applied retroactively, which means that any previous 5.0 reports will have new *Workplace Hostility* ratings in them. This document provides a brief explanation of how the rating calculation changed and why it changed.

What is Workplace Hostility?

Workplace Hostility measures the degree to which individuals in the workplace act in an angry or hostile manner towards others and focuses on the past three months. It includes behaviors such as insults, sarcasm, or gestures to humiliate a member as well as perception of others interfering with one's work performance or not providing assistance when needed. Workplace hostility is associated with lower levels of readiness and retention, as well as a higher likelihood of sexual harassment, sexual assault, and racial/ethnic harassment and discrimination.¹

There are six questions on the DEOCS 5.0 that measure *Workplace Hostility*; participants are asked how often they experienced each within the past three months, on a scale of *Never* to *Often*. The questions are:

How often does someone from your [unit | organization | Military Service Academy | Military Service Academy Preparatory School] ... :

1. intentionally interfere with your work performance?
2. take credit for work or ideas that were yours?
3. gossip or talk about you?
4. use insults, sarcasm, or gestures to humiliate you?

¹ For more information about *Workplace Hostility*, including survey questions and relevant scientific research, please see the *Workplace Hostility* Factor Rating Interpretation Guide here: <https://www.defenseculture.mil/Assessment-to-Solutions/Factor-Products/Risk-Factors/#workplace-hostility>.

5. not provide you with information and assistance when needed?
6. yell when they are angry?

How were factor ratings calculated and how are they calculated now?

Previous Calculation Method

Prior to May 2021, *Workplace Hostility* ratings were calculated based on how each participant responded to the set of six questions. Participants were grouped into one of two categories:

- “**Presence of Workplace Hostility**” = unfavorable category; participant reported experiencing at least one of the six behaviors *Rarely*, *Sometimes*, or *Often*.
- “**No Presence of Workplace Hostility**” = favorable category; participant reported *Never* experiencing any or at least half of the behaviors (and did not report experiencing any behavior *Rarely*, *Sometimes*, or *Often*).

An example using mock data is below. In this example, 10 participants in Unit A answered the six *Workplace Hostility* questions as detailed in Table 1. Their corresponding favorable or unfavorable category is in the last column of the table.

Table 1.
Individual-level Mock Data for the Six Workplace Hostility Questions

	Q1	Q2	Q3	Q4	Q5	Q6	Category
Participant 1	Rarely	Never	Never	Never	Never	Never	Presence
Participant 2	Rarely	Never	Never	Sometimes	Never	Never	Presence
Participant 3	Often	Rarely	Often	Often	Often	Rarely	Presence
Participant 4	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Never	Presence
Participant 5	Never	Rarely	[no answer]	Never	Never	Never	Presence
Participant 6	Rarely	Never	Never	Never	Never	Never	Presence
Participant 7	Never	Never	Never	Never	Rarely	[no answer]	Presence
Participant 8	Never	Never	Rarely	[no answer]	Rarely	Never	Presence
Participant 9	Never	Never	Never	Rarely	Never	Never	Presence
Participant 10	Never	Never	Never	Never	Never	Never	No Presence

Using this calculation method, Unit A’s *Workplace Hostility* ratings would be:

- “**Presence of Workplace Hostility**” = **90%**; 9 out of 10 participants reported experiencing at least one of the six behaviors *Rarely*, *Sometimes*, or *Often*.

- **“No Presence of Workplace Hostility” = 10%**; 1 out of 10 participants reported *Never* experiencing any or at least half of the behaviors (and did not report experiencing any behavior *Rarely*, *Sometimes*, or *Often*).

With this method, each participant is categorized into the “presence” or “no presence” category. The interpretation of the “presence” category is 90% of participants reported a presence of workplace hostility or 90% reported experiencing at least one of the six behaviors *Rarely*, *Sometimes*, or *Often*. With this method, you cannot recreate these ratings using the detailed tables in the Item Summary section of the DEOCS reports. The Item Summary table displays aggregate responses to the six questions; you would need access to individual-level data (similar to the example in Table 1) to understand whether participants should be categorized as reporting a **“presence of Workplace Hostility”** or **“no presence of Workplace Hostility.”**

This same method is also used to create ratings for *Racially Harassing Behaviors*, *Sexist Behaviors*, and *Sexually Harassing Behaviors*. All of these factors also ask participants about the frequency with which they experienced specific, negative behaviors. The calculation method used equates to zero-tolerance for these behaviors. In other words, any experience of any behavior (even if the experience was rare) is not tolerated and considered unfavorable.

New Calculation Method

As of June 2022, *Workplace Hostility* ratings are calculated based on the responses to the set of six questions. Instead of grouping participants, this method groups response types into three categories:

- **“Frequent Workplace Hostility”** = unfavorable category; total percentage of *Sometimes* or *Often* responses to the six questions.
- **“Rare Workplace Hostility”** = neither favorable nor unfavorable category; total percentage of *Rarely* responses to the six questions.
- **“No Workplace Hostility”** = favorable category; total percentage of *Never* responses to the six questions.

An example using the same mock data from 10 participants in Unit A is below. Because this method groups response types rather than participants, we only need the aggregate results to each of the six questions that make up *Workplace Hostility*; we do not need the individual-level results showing how each participant responded to each question. Table 2 below shows the aggregate results from the 10 participants in Unit A and the resulting factor ratings for the three categories.

Table 2.
Aggregate Mock Data for the Six Workplace Hostility Questions

	Never	Rarely	Sometimes	Often	Total
Q1	50% (5)	30% (3)	10% (1)	10% (1)	100% (10)
Q2	67% (6)	22% (2)	11% (1)	0% (0)	100% (9)
Q3	67% (6)	11% (1)	11% (1)	11% (1)	100% (9)
Q4	56% (5)	11% (1)	22% (2)	11% (1)	100% (9)
Q5	60% (6)	20% (2)	10% (1)	10% (1)	100% (10)
Q6	89% (8)	11% (1)	0% (0)	0% (0)	100% (9)
	No Workplace Hostility	Rare Workplace Hostility	Frequent Workplace Hostility		Total responses 56
	(5+6+6+5+6+8) / 56 = 64%	(3+2+1+1+2+1) / 56 = 18%	(1+1+1+2+1+0+1+0+1+1+1+0) / 56 = 18%		

Using this new calculation method, Unit A's *Workplace Hostility* ratings are:

- **“Frequent Workplace Hostility” = 18%**; 10 out of 56 responses to the six questions were *Sometimes* or *Often*.
- **“Rare Workplace Hostility” = 18%**; 10 out of 56 responses to the six questions were *Rarely*.
- **“No Workplace Hostility” = 64%**; 36 out of 56 responses to the six questions were *Never*.

With this method, each response is categorized into one of the three categories listed above. In this example, 64% of responses indicated frequent workplace hostility or 64% of responses were *Sometimes* or *Often*. With this method, you can recreate these ratings using the detailed tables in the Item Summary section of the DEOCS reports.

This calculation method is similar to the way ratings for most of the factors on the DEOCS are calculated, with the exception of *Racially Harassing Behaviors*, *Sexist Behaviors*, and *Sexually Harassing Behaviors*. This method places an emphasis on the frequency with which behaviors occurred. In other words, experiencing more behaviors more frequently results in a higher “frequent workplace hostility” rating.

Detailed Analyses

To evaluate the various calculation methods, we conducted analyses using the DEOCS 5.0 results from January to April 2021 and the 2018 Workplace and Gender Relations Survey of Active Duty Military (WGRA).² We examined three different methods for calculating *Workplace Hostility* factor ratings:

1. **Participant method.** This is the original scoring method. Participants are grouped into one of two categories:
 - “**Presence of Workplace Hostility**” = unfavorable category; percentage of participants who reported experiencing at least one of the six behaviors *Rarely*, *Sometimes*, or *Often*.
 - “**No Presence of Workplace Hostility**” = favorable category; percentage of participants who reported *Never* experiencing any or at least half of the behaviors (and did not report experiencing any behavior *Rarely*, *Sometimes*, or *Often*).
2. **Modified participant method.** Participants are grouped into one of two categories:
 - “**Presence of Workplace Hostility**” = unfavorable category; percentage of participants who reported experiencing at least one of the six behaviors *Sometimes* or *Often*.
 - “**No or Rare Presence of Workplace Hostility**” = favorable category; percentage of participants who reported *Never* or *Rarely* experiencing any or at least half of the behaviors (and did not report experiencing any behavior *Sometimes* or *Often*).
3. **Response type method.** Responses are grouped into one of three categories:
 - “**Frequent Workplace Hostility**” = unfavorable category; total percentage of *Sometimes* or *Often* responses to the six questions.
 - “**Rare Workplace Hostility**” = neither favorable nor unfavorable category; total percentage of *Rarely* responses to the six questions.
 - “**No Workplace Hostility**” = favorable category; total percentage of *Never* responses to the six questions.

For each of the three methods, we calculated average unfavorable ratings and correlated these unfavorable ratings with key outcomes.

Table 3 below presents the average unit/organization unfavorable ratings calculated using the DEOCS 5.0 data. The “participant method” (i.e., the original scoring method) produced the highest average rating and the “response type method” produced the lowest average rating. Average unfavorable ratings for the other risk factors measured

² Breslin, R. A., Davis, L., Hylton, K., Hill, A., Klauberg, W., Petusky, M., & Klahr, A. (2019). 2018 Workplace and gender relations survey of active duty members: Overview report. OPA report no. 2019-027. Alexandria, VA: Office of People Analytics.

on the DEOCS ranged from 2% to 36%. The “response type method” produced average unfavorable *Workplace Hostility* ratings that were more in line with the other risk factors on the DEOCS.

Table 3.
Average Unit/Organization Unfavorable Workplace Hostility Ratings

	Participant Method	Modified Participant Method	Response Type Method
Average <i>Workplace Hostility</i> unfavorable rating	86%	57%	22%

Table 4 below displays correlations between unfavorable ratings for *Workplace Hostility* and unfavorable ratings for *Racially Harassing Behaviors* and *Sexually Harassing Behaviors*, as measured on the DEOCS 5.0. These two factors were chosen because prior research has demonstrated a relationship between workplace hostility and sexual harassment^{3,4} and racial/ethnic harassment and discrimination.⁵ While all correlations were significant at $p < .05$, the “response type method” produced the highest correlations.

Table 4.
Correlations Between Unfavorable Ratings for Workplace Hostility, Racially Harassing Behaviors, and Sexually Harassing Behaviors

	Participant Method	Modified Participant Method	Response Type Method
Correlation with <i>Racially Harassing Behaviors</i>	0.55	0.64	0.71
Correlation with <i>Sexually Harassing Behaviors</i>	0.60	0.69	0.75

We also examined a series of correlations using data from the 2018 WGRA. This survey is used to create estimated prevalence rates of sexual harassment and sexual

³ Brown, J., Gouseti, I., & Fife-Schaw, C. (2018). Sexual harassment experienced by police staff serving in England, Wales and Scotland: A descriptive exploration of incidence, antecedents and harm. *The Police Journal*, 91(4), 356–374. <https://doi.org/10.1177/0032258X17750325>

⁴ Tinkler, J. E., & Zhao, J. (2019). The Sexual Harassment of Federal Employees: Gender, Leadership Status, and Organizational Tolerance for Abuses of Power. *Journal of Public Administration Research and Theory*, muz037. <https://doi.org/10.1093/jopart/muz037>

⁵ Clare, R., Lawhead, A., Dahl, J., Klahr, K., Schreiner, J., Moore, A., Neria, A., McGrath, D., Murray, C., Peebles, H., Trump-Steele, R., Hylton, K., Harcey, S., Vega, R., Tuskeviciute, R., Tercha, J., Barry, A., Owen, B., & Mirani, K. (2021). Defense organizational climate survey (DEOCS) redesign: Phase 1 overview report (OPA Report No. 2021-158). U.S. Department of Defense, Office of People Analytics.

assault for the active component; it also measures workplace hostility.⁶ While the WGRA measure of workplace hostility does differ from the DEOCS 5.0⁷ measure, we created a proxy unfavorable workplace hostility rating to use in analyses. This proxy unfavorable rating was correlated with experiences of sexual harassment and sexual assault at the individual- and installation-level.⁸ Table 5 displays the results of this analysis. All correlations were significant at $p < .05$ and the results were mixed. For the individual-level analysis, the “response type method” produced the highest correlations, while the “participant method” and the “participant method modified” produced the highest correlations in the installation-level analysis.

Table 5.
Correlations Between Proxy Unfavorable Workplace Hostility Ratings, Sexual Harassment, and Sexual Assault Measured on the 2018 WGRA

	Participan Method	Modified Participant Method	Response Type Method
Individual-level			
Correlation with Sexual Harassment	0.20	0.25	0.32
Correlation with Sexual Assault	0.07	0.09	0.11
Installation-level			
Correlation with Sexual Harassment	0.17	0.14	0.14
Correlation with Sexual Assault	0.15	0.21	0.14

⁶ Breslin, R. A., Davis, L., Hylton, K., Hill, A., Klauber, W., Petusky, M., & Klahr, A. (2019). 2018 Workplace and gender relations survey of active duty members: Overview report. OPA report no. 2019-027. Alexandria, VA: Office of People Analytics.

⁷ The question stem and the response options for the workplace hostility items on the WGRA are different than those on the DEOCS 5.0. This analysis used six of the nine workplace hostility items from the 2018 WGRA that most closely aligned with the questions on the DEOCS 5.0. It also used the set of questions related to coworker behaviors rather than immediate supervisor behaviors. Finally, the WGRA five-point scale was aligned with the DEOCS four-point scale such that *Never* aligned with *Never*, *Once or Twice* aligned with *Rarely*; and *Sometimes*, *Often*, and *Very Often* aligned with *Sometimes* and *Often*.

⁸ Installation-level estimates were calculated using unweighted data because the focus of this effort was to explore relationships between variables rather than estimating specific rates for each installation. These relationships should be true and present regardless of the population frame, and therefore is independent of the population frame that existed at the time. For more information on installation-level estimates from the 2018 WGRA, please see Samuelson, H., Trump-Steele, R., Severance, L., Siebel, M., Luchman, J., Dotson, H., Scolese, A., Sampath, S., & Klahr, A. (2021). 2018 Contextual risk factors associated with sexual assault in the active duty (Report No. 2021-06). Alexandria, VA: Office of People Analytics.

Given the above results and considering what would be most useful for users, the DEOCS team identified the “response type method” as the best calculation approach for *Workplace Hostility*. The average unfavorable ratings, as well as the results from the correlation analyses supported this method.

Will other DEOCS 5.0 factor ratings change?

No other DEOCS 5.0 factor ratings will change. In particular, ratings for *Racially Harassing Behaviors*, *Sexist Behaviors*, and *Sexually Harassing Behaviors* will continue to be calculated the same way they are now. The unfavorable ratings for these factors will continue to include any participant that reports experiencing at least one of the behaviors *Rarely*, *Sometimes*, or *Often*. This calculation method aligns with the DoD’s zero-tolerance policy of racial/ethnic harassment and discrimination, gender discrimination, and sexual harassment. It also aligns with the goal of the DEOCS, which is to provide an early indicator for potential areas of concern before more serious behaviors can occur.

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