



U.S. Department of Defense

Factor Rating Interpretation Guide Connectedness

What is Connectedness?

Connectedness measures an individual's closeness or belongingness to their unit or organization, and their satisfaction with their relationship to, and support from, others in that unit or organization.¹² This also includes organizational identification which is the degree to which an individual views themselves as a member of the organization and to what extent they experience a sense of oneness with the organization's values, brand, and methods.¹⁴

The following items are used to assess *Connectedness* on the DEOCS using a five-point response scale from *Strongly Disagree* to *Strongly Agree*:

- These days, I feel like I belong.
- These days, I feel that there are people I can turn to in times of need.
- These days, I think I make things worse for the people in my life.
- My future seems dark to me.

Why is it important?

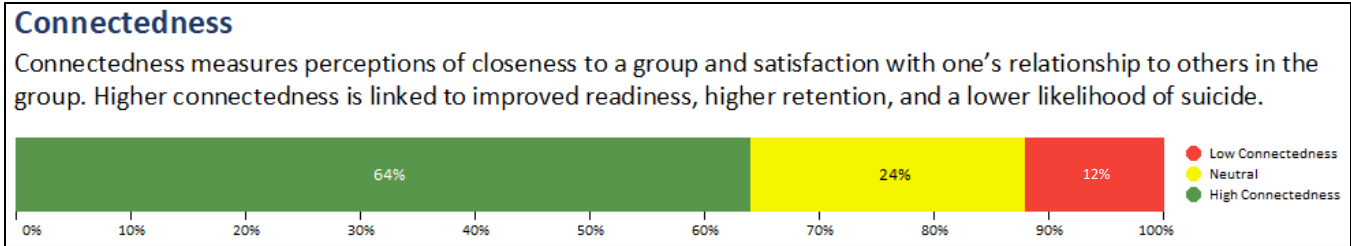
Research has shown that *Connectedness* or belongingness is associated with an increase in work performance and lower turnover intentions.^{1,2} For example, one study found that strong organizational identification was correlated with lower turnover intentions as well as greater trust and commitment to the organization.³ Similarly, *Connectedness* was associated with increased effort-related performance among civilian workers while ostracism at work was associated with worse self-rated performance.⁴

Connectedness is also well studied and has been shown to be a significant protective factor for suicidal ideation, particularly in military populations.^{5,6,7,8,9} A study that looked at suicide rates in the U.S. Military found that hopelessness and perceived burdensomeness were risk factors more often communicated in suicide notes but not verbally. Thwarted belongingness was the risk factor most often communicated verbally in the suicide note.¹⁰ Additionally, a study to determine the intensity of combat exposure as it relates to suicidal ideation among active duty Air Force personnel found that suicidal ideation was more severe among Airmen above the age of 29 years with high combat exposure and low levels of belongingness.¹¹ Interpersonal social support—as indicated by availability to speak with someone about problems, perception of identification and ability to socialize with a group, and perceived availability of material aids—was also associated with reduced risk of suicidal ideation among treatment-seeking active duty personnel with posttraumatic stress disorder after deployments in or nearby Iraq or Afghanistan.¹² Finally, a study by the World Health Organization also found a significant link between hopelessness and suicidal ideation among younger adults.¹³

For more information on how to review your DEOCS results with these key outcomes in mind, please see the "Strategic Target Outcome Guide" in the Quick Links menu of the DEOCS dashboard.

How do I read my factor ratings?

The DEOCS dashboard displays results for *Connectedness* in a stacked bar graph showing ratings for **Low Connectedness**, **Neutral**, and **High Connectedness**. Because *Connectedness* is a factor that is measured by multiple questions, you should interpret the results as “X% of responses” (not participants). An example is shown below:



Favorable rating: 64% of responses indicated **high connectedness**.

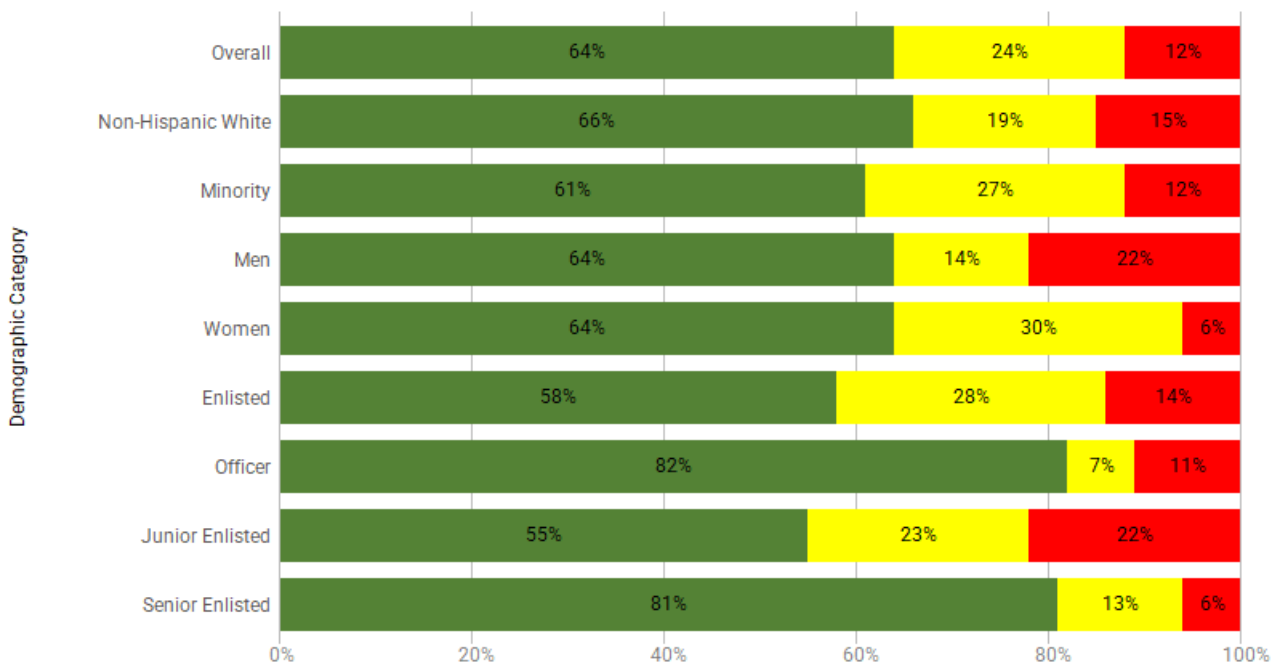
Neutral rating: 24% of responses indicated **neither high nor low connectedness**.

Unfavorable rating: 12% of responses indicated **low connectedness**.

For the graph showing results by demographic categories, the percentages represent the percentage of responses from each demographic category that were favorable, neutral, or unfavorable.

Connectedness Ratings by Demographic Category

This graph displays Connectedness ratings by demographic category. No data are displayed if fewer than five people from a demographic category responded to this set of questions.



The first bar will always show the overall results and will be the same percentages that are shown in the stacked bar graph. The next bars will represent various demographic categories for your organization. These results can help determine whether some groups of people in

your organization have particularly high or low perceptions of climate factors. In addition, you may have different categories than in the example above. If your organization did not have any participants from a particular demographic category or had fewer than five participants from a particular category, you would not see those categories in your graph. For more information on how the demographic groups are created, please see the “Data Overview” in the Quick Links menu of the DEOCS dashboard.

In this example, the favorable ratings (marked in green) can be interpreted as:

- 66% of responses from non-Hispanic White participants indicated high connectedness, while 61% of responses from minority participants indicated high connectedness;
- 64% of responses from men indicated high connectedness and 64% of responses from women indicated high connectedness;
- 58% of responses from enlisted participants indicated high connectedness, while 82% of responses from officers indicated high connectedness;
- 55% of responses from junior enlisted participants indicated high connectedness, while 81% of responses from senior enlisted participants indicated high connectedness.


The neutral ratings (marked in yellow) can be interpreted as:

- 19% of responses from non-Hispanic White participants indicated neither high nor low connectedness, while 27% of responses from minority participants indicated neither high nor low connectedness;
- 14% of responses from men indicated neither high nor low connectedness, while 30% of responses from women indicated neither high nor low connectedness;
- 28% of responses from enlisted participants indicated neither high nor low connectedness, while 7% of responses from officers indicated neither high nor low connectedness;
- 23% of responses from junior enlisted participants indicated neither high nor low connectedness, while 13% of responses from senior enlisted participants indicated neither high nor low connectedness.


The unfavorable ratings (marked in red) can be interpreted as:

- 15% of responses from non-Hispanic White participants indicated low connectedness, while 12% of responses from minority participants indicated low connectedness;
- 22% of responses from men indicated low connectedness, while 6% of responses from women indicated low connectedness;
- 14% of responses from enlisted participants indicated low connectedness, while 11% of responses from officers indicated low connectedness;
- 22% of responses from junior enlisted participants indicated low connectedness, while 6% of responses from senior enlisted participants indicated low connectedness.

You may also see trends over time for your *Connectedness* favorable rating if there are previous 5.0 surveys with the same unit identification code (UIC) and the same commander/leader.

When applicable, trends over time are available in the dashboard by clicking on this icon: . They also appear in the PDF reports as a table. Even if your report includes trends over time, the results may not be comparable in certain circumstances. It is important to understand differences in roster size and roster composition at different time points as these items may impact comparability of trend results. Take a close look at the number of participants registered, surveys returned, and the response rate for any surveys for which trends are available to report; use caution when comparing trends over time if there are big differences in these numbers between surveys. Other things, such as deployments or changes in policy, may also make trends less comparable. For more information on factor rating trends, please

see the “Data Overview” in the Quick Links menu of the DEOCS dashboard.

Finally, you may see an alert  for your *Connectedness* ratings. This means that your unit’s/organization’s favorable rating for *Connectedness* is **very low** compared to the other favorable ratings for this factor in your Service component. When applicable, this alert icon appears in the dashboard inside the “Protective Factors – Favorable Ratings” heading; click on the icon to see if *Connectedness* is listed in the table. The alert icon may also appear in the *Connectedness* section of the PDF reports. To identify whether your *Connectedness* ratings receive an alert, cut-off scores were created by rank-ordering all favorable ratings for this factor within a Service component. If your favorable rating for *Connectedness* is below your Service component’s cut-off score, this icon will appear in your report. There are unique cut-off scores for each factor within each Service component. Because of this, you may notice that some of the factors for which you have an alert have very different ratings. For more information on how these alerts are created, please see the “Data Overview” in the Quick Links menu of the DEOCS dashboard.

How are my unit’s/organization’s ratings created?

Connectedness ratings are created by combining responses to four questions from a five-point *Strongly Agree* to *Strongly Disagree* scale. Two of the four questions that make up this factor are negatively worded, meaning that agreement with these items indicates an unfavorable response. Therefore, these two items need to be reverse coded when calculating factor ratings; they are marked with an asterisk (*) in the table below.

Connectedness Questions	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Total
These days, I feel like I belong.	6% (14)	6% (14)	24% (55)	43% (100)	21% (48)	100% (231)
These days, I feel that there are people I can turn to in times of need.	4% (10)	7% (17)	24% (54)	40% (91)	24% (55)	100% (227)
Connectedness Questions	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Total
These days, I think I make things worse for the people in my life. *	3% (8)	9% (20)	24% (55)	20% (47)	43% (100)	100% (230)
My future seems dark to me. *	5% (11)	7% (16)	24% (55)	8% (19)	56% (130)	100% (231)
	Low Connectedness		Neutral	High Connectedness		Total responses 919
	$(14+14+10+17+8+20+11+16) / 919 =$ 12%		$(55+54+55+55) / 919 =$ 24%	$(100+48+91+55+47+100+19+130) / 919 =$ 64%		


The table above displays the percentage of responses (and number of responses in parentheses) for each question across the five response options (*Strongly Disagree*, *Disagree*, *Neither Agree nor Disagree*, *Agree*, and *Strongly Agree*). For the first question, 14 participants selected *Strongly Disagree*; this represents 6% of participants that responded to this question (14 / 231 = .061 or 6%).


Note that percentages are calculated out of the total number of participants responding to that question and not the total number of participants taking the survey. Participants can skip questions, so you may notice that total responses to questions vary. In the above example, 231 people responded to the first question so all percentages in this row use 231 as the denominator. Only 227 people responded to the second question, so all percentages in this row use 227 as the denominator. In addition, factor ratings may not always add to 100% due to rounding.

- The **unfavorable** rating, named **Low Connectedness**, is a combination of all responses of *Strongly Disagree* and *Disagree* from the two positively worded questions and *Strongly Agree* and *Agree* from the two negatively worded questions in the *Connectedness* scale.
 - For this example, 14 people strongly disagreed with the first question and 14 disagreed. In addition, 10 people strongly disagreed with the second question and 17 disagreed. For the two negatively worded questions, a total of 19 people strongly agreed and 36 people agreed. In total, 110 responses were unfavorable to these four questions ($14+14+10+17+8+20+11+16 = 110$).
 - To produce an overall score for **Low Connectedness** representing unfavorable reactions to these four questions, the total number of responses (110) is divided by the total number of people who responded to all of the *Connectedness* questions. 231 people responded to the first question, 227 to the second, 230 to the third, and 231 to the fourth for a total of 919 responses to all the questions. **This produces a Low Connectedness rating of 12% ($110 / 919 = .1197$).**
- To create the **Neutral** rating, the same process above is followed, except the score is created from only one response option. The *Neither Agree nor Disagree* responses are added from all questions.
 - For this example, there are 219 *Neither Agree nor Disagree* responses across both questions ($55+54+55+55 = 219$). This total is divided by the total number of responses to all of the questions ($219 / 919 = .2383$). **This rounds to a Neutral rating of 24%.**
- To create the **favorable** rating, named **High Connectedness**, the *Strongly Agree* and *Agree* responses from the positively worded questions and the *Strongly Disagree* and *Disagree* responses from the negatively worded questions are combined.
 - For this example, that is $100+48+91+55+47+100+19+130 = 590$ total responses. This total is divided by the total number of responses to all of the questions ($590 / 919 = .6420$). **This rounds to a High Connectedness rating of 64%.**

How do I know if my factor ratings are good or bad?

The DEOCS team is working on a data-driven approach that will help you understand what a rating means for an organization's likelihood of positive or negative outcomes. In the meantime, we recommend using the following strategies to help put your *Connectedness* ratings into context and understand whether actions should be taken to address low favorable ratings:

1. If applicable, review the information in the alert icon  to see if your *Connectedness* ratings are called out. This icon would appear in the dashboard and in the PDF reports if your unit's/organization's favorable rating for *Connectedness* is very low compared to others in your same Service component. You should consider taking action to raise this rating.

2. Look at the Item Summary table on the *Connectedness* details page to understand which questions may be driving your favorable rating. This factor is created from four questions, so compare the percentage of participants who selected positive responses to each question. If there are questions that have a lower percentage of participants who selected positive responses, these are the questions driving a lower favorable rating and could help you pinpoint more specific actions to increase your favorable rating for *Connectedness*.
3. Examine the bar graph showing the overall favorable rating for *Connectedness* and the favorable ratings by various demographic groups. Look at each group's rating in relation to the overall unit/organization rating. If any groups have particularly low favorable ratings for *Connectedness*, this could help you plan actions to increase your favorable rating within areas of your organization.
4. If applicable, review your *Connectedness* favorable rating trends over time. You can view these trends by clicking on this icon  in the dashboard; they also appear as a table in the PDF reports. Take note if your ratings are going down over time. You may need to take action to reverse this trend.

Factor Improvement Tools for Connectedness

The following resources may be useful as you make plans or take action to improve your *Connectedness* ratings. Each resource listing contains a description, a link, and the relevant audience. Some resources may be more appropriate for the commander/leader, unit/organization personnel, survey administrators, or the Integrated Primary Prevention Workforce (IPPW); the relevant audience advises which group may benefit from use of the recommended resource.

- **14 Simple Ways to Connect with Your People.** Provides tips for leaders on how to better connect with those they lead.
<https://themilitaryleader.com/14-simple-ways-to-connect-with-your-people/>
Audience: Commander/Leader, unit personnel, survey admin, IPPW
- **The Importance of Connectedness.** Discusses how to build and model connectedness for others.
https://www.army.mil/article/238415/the_importance_of_connectedness
Audience: Commander/Leader, unit personnel, survey admin, IPPW

Scientific Research References on Connectedness

1. Van Dick, R., Christ, O., Stellmacher, J., Wagner, U., Ahlswede, O., Grubba, C., ... Tissington, P.A. (2004), should I stay or should I go? Explaining turnover intentions with organizational identification and job satisfaction. *British Journal of Management*, 15(4), 351-360. <https://doi.org/10.1111/j.1467-8551.2004.00424.x>
2. Mulki, J. P., & Jaramillo, F. (2011). Workplace isolation: Salespeople and supervisors in USA. *The International Journal of Human Resource Management*, 22(04), 902–923.
3. Barattucci, M., Teresi, M., Pietroni, D., Iacobucci, S., Lo Presti, A., & Pagliaro, S.

- (2021). Ethical climate(s), distributed leadership, and work outcomes: The mediating role of organizational identification. *Frontiers in psychology*, 11, 564112. <https://doi.org/10.3389/fpsyg.2020.564112>
4. O'Reilly, J., & Robinson, S. L. (2009). The negative impact of ostracism on thwarted belongingness and workplace contributions. *Academy of Management Annual Meeting Proceedings*, 2009(1), 1–7.
 5. Anestis, M. D., Khazem, L. R., Mohn, R. S., & Green, B. A. (2015). Testing the main hypotheses of the interpersonal–psychological theory of suicidal behavior in a large diverse sample of United States military personnel. *Comprehensive Psychiatry*, 60, 78–85. <https://doi.org/10.1016/j.comppsy.2015.03.006>
 6. Saxena, S., Krug, E. G., and Chestnov, O. (2014). Preventing Suicide: A Global Imperative. World Health Organization. <https://apps.who.int/iris/handle/10665/131056>
 7. Chu, C., Buchman-Schmitt, J. M., Hom, M. A., Stanley, I. H., & Joiner, T. E. (2016). A test of the interpersonal theory of suicide in a large sample of current firefighters. *Psychiatry Research*, 240(30), 26–33. <https://doi.org/10.1016/j.psychres.2016.03.041>
 8. North Atlantic Treaty Organization, Science and Technology Organization. (2018). Military suicide prevention: Report prepared for NATO leadership (TR-HRM-218). <https://bit.ly/2rbkOZs>
 9. Khazem, L. R., Law, K. C., Green, B. A., & Anestis, M. D. (2015). Examining the relationship between coping strategies and suicidal desire in a sample of United States military personnel. *Comprehensive Psychiatry*, 57, 2–9. <https://doi.org/10.1016/j.comppsy.2014.11.009>
 10. Cox, D.I., Holloway, M., Greene-Palmer, F., Bakalar, J., Schendel, C., Nademin, E., Jobes, D., Englert, D., Kindt, M. (2011). Suicide in the United States Air Force: Risk factors communicated before and at death. *Journal of Affective Disorders*. 133(3). 398-405. [10.1016/j.jad.2011.05.011](https://doi.org/10.1016/j.jad.2011.05.011).
 11. Bryan CJ, McNaughton-Cassill M, Osman A. (2013). Age and belongingness moderate the effects of combat exposure on suicidal ideation among active duty Air Force personnel. *Journal of Affective Disorders*, 150(3), 1226–1229.
 12. McLean, C. P., Zang, Y., Zandberg, L., Bryan, C. J., Gay, N., Yarvis, J. S., & Foa, E. B. (2017). Predictors of suicidal ideation among active duty military personnel with posttraumatic stress disorder. *Journal of Affective Disorders*, 208, 392–398. <https://doi.org/10.1016/j.jad.2016.08.061>
 13. Sisask, M., Värnik, A., Kõlves, K., Konstabel, K., & Wasserman, D. (2008). Subjective psychological well-being (WHO-5) in assessment of the severity of suicide attempt. *Nordic Journal of Psychiatry*, 62(6), 431–435. <https://doi.org/10.1080/08039480801959273>