

Norming the DEOMI Organizational Climate Survey

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ABSTRACT

Beginning in 2005, the Defense Equal Opportunity Management Institute (DEOMI) began replacing the Military Equal Opportunity Climate Survey (MEOCS) with the DEOMI Organizational Climate Survey (DEOCS). The DEOCS measures aspects of organizational climate, including equal opportunity (EO) and organizational effectiveness (OE), in military units and civilian sectors in the Department of Defense. It consists of 68 items, 13 of which deal with demographic information, 30 with EO, and 25 with OE. The 30 items in EO portion are grouped into eight scales (including Sexual Harassment and Discrimination and Positive EO Behavior). The 25 items in the OE portion are grouped into six scales (including Organizational Commitment and Job Satisfaction). This report provides normative information on the items and these 13 scales in the DEOCS based on the responses of 477,138 military personnel. Women reported lower levels of EO than men. Likewise non-Whites reported lower levels of EO than Whites. The internal consistency of the 13 scales was high ($\alpha > .81$). In general, EO scales correlate highly with each other, as well as OE scales with each other. However, correlations between EO and OE scales are much lower. A model linking the scales measuring EO and those measuring OE is proposed.

INTRODUCTION

A major research project for the Defense Equal Opportunity Management Institute (DEOMI) has been the development and testing of the Military Equal Opportunity Climate Survey (MEOCS; Landis, Dansby, & Faley, 1993). This project has included revising the MEOCS and keeping it up to date. Suggested revisions to the MEOCS have included shortening it and making its items more neutral (i.e., replacing references to “majority,” “minority,” “men,” and “women” with more general terms “race” and “gender” and then using demographic information to determine the respondent’s specific race and gender). The resulting revision of the MEOCS called the DEOCS (DEOMI Organizational Climate Survey) met and in many cases surpassed its predecessor in psychometric qualities (Truhon, 2003).

The DEOCS consists of 13 scales. Eight of these scales deal with equal opportunity (EO), five with organizational effectiveness (OE). The DEOCS has undergone a number of changes since Truhon’s (2003) report. The purpose of this study is to provide preliminary psychometric information on the DEOCS.

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METHOD

Participants

The sample consists of 477,138 personnel with the United States Department of Defense. These personnel include members of all branches of the United States military as well as civilian workers at the Department of Defense. The participants completed the DEOCS between June 2005 and February 2007.

Materials

The current revised version of the DEOCS consists of 68 items, 13 of which provide demographic information. The EO section of the DEOCS consists of 30 items comprising eight scales (two to four items per scales). These scales (Sexual Harassment and Discrimination, Differential Command Behavior toward Women and Minorities, Positive EO Behavior, Racist Behavior, Age Discrimination, Religious Discrimination, Disability Discrimination, and Overall EO Climate) were developed from earlier versions of the MEOCS. The 25 items in five scales (Organizational Climate, Trust in the Organization, Work Group Effectiveness, Work Group Cohesion, Leadership Cohesion, and Job Satisfaction) of the OE section were similarly developed.

All scales use a Likert-type rating scale (1= “very high chance that the action occurred,” 2= “reasonably high chance that the action occurred,” 3= “moderate chance that the action occurred,” 4= “small chance that the action occurred”, and 5= “almost no chance that the action occurred”). All responses to items were coded so that higher scores indicated better equal opportunity environment.

Procedure

Commanders or managers of Department of Defense organizations can request an EO evaluation from DEOMI. Copies of the DEOCS and optical scan forms are then sent to the EO officer for that unit. EO officers administer the DEOCS to personnel within the unit and return the forms for analysis to DEOMI. EO officers can also request that an online version of the DEOCS be administered. Previous research has found paper-and-pencil and online versions of the DEOCS to be comparable (Truhon, 2005).

RESULTS

Summary statistics for each of the DEOCS scales are presented in Table 1. The sample sizes for each scale vary because of missing from some respondents. The Ns for Age Discrimination and Disability Discrimination are much lower than for the other scales because military personnel are not required to answer those items.

Most of the scales have means between 3.7 and 4.2. With values such as these there is sufficient variability to examine relationships between variables. Three scales have high means (Differential Command Behavior, Religious Discrimination, and Disability Discrimination). As a result these scales have low levels of variability and high skewness.

The next few figures present comparisons between several demographic groups on the DEOCS scales. The differences between genders were small and showed no distinctive pattern.

Table 1
Descriptive Statistics for the DEOCS Scales

Scale	N	Mean	Std. Deviation	Variance	Skewness	Kurtosis
Sexual Harassment & Discrimination	470887	4.0617	.95953	.921	-1.059	.517
Differential Command Behavior	467100	4.4556	.82373	.679	-1.843	3.271
Positive EO Behavior	474387	4.0586	1.00255	1.005	-1.033	.426
Racist Behaviors	473363	3.7911	1.14678	1.315	-.861	-.194
Age Discrimination	81502	3.9867	1.13798	1.295	-.988	.022
Religious Discrimination	465973	4.3945	.86223	.743	-1.716	2.773
Disability Discrimination	80512	4.2385	.99958	.999	-1.339	1.069
Organizational Commitment	474342	3.4691	.98345	.967	-.374	-.421
Trust in the Organization	473562	3.4175	1.06275	1.129	-.364	-.558
Work Group Effectiveness	473923	4.1597	.85062	.724	-1.130	1.097
Work Group Cohesion	473656	3.9372	.97350	.948	-.912	.343
Leadership Cohesion	473500	3.5400	1.08868	1.185	-.484	-.403
Job Satisfaction	473621	3.8537	.86545	.749	-.687	.112
Overall EO Climate	468538	3.7202	1.07390	1.153	-.551	-.318

In looking at the differences by race Whites generally have a more favorable view of EO than non-Whites. The biggest difference is for Overall EO Climate. There are smaller differences in OE scales (see Figure 1). Although the differences are smaller, non-Hispanics have a more favorable view of EO than Hispanics.

Age differences are also apparent. The general trend is that the older the personnel are, the more likely that they will have a more favorable view of EO climate (see Figure 2). There is a similar pattern when examining enlisted military personnel and officers. Senior level personnel (enlisted and officers) have a more favorable view of EO climate than those at the junior level.

The correlations between the scales are presented in Table 2. The reliabilities (Cronbach's alpha) are presented in the diagonals. All reliabilities are high ($\alpha > .81$). It is also noteworthy that the correlations between scales that measure aspects of EO are reasonably high as are the correlations between scales that measure aspects of OE. These correlations are higher than the correlations between EO and OE scales. There are some exceptions to this: Positive EO Behavior has low correlations with all other scales. Overall EO Climate correlates about equally with EO and OE scales.

Figure 1
DEOCS Scale Scores by Race

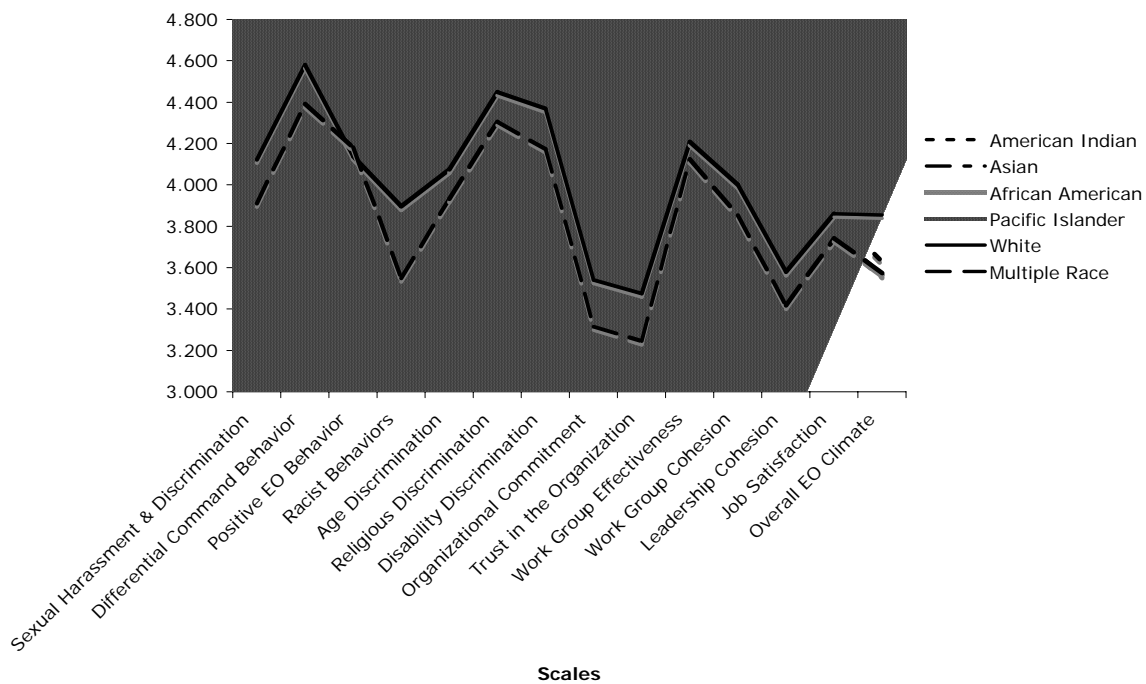


Figure 2
DEOCS Scale Scores by Age

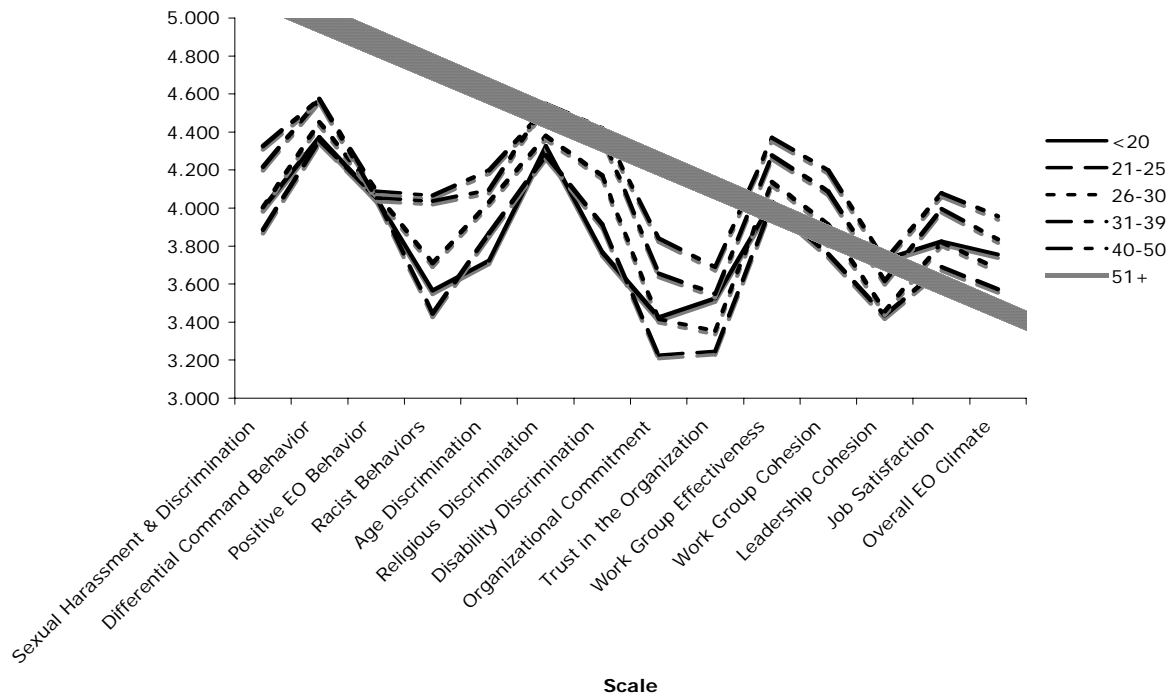


Table 2
Correlations Between DEOCS Scales

Scale	Sexual Harassment & Discrimination	Differential Command Behavior	Positive EO Behavior	Racist Behaviors	Age Discrimination	Religious Discrimination	Disability Discrimination	Organizational Commitment	Trust in the Organization	Work Group Effectiveness	Work Group Cohesion	Leadership Cohesion	Job Satisfaction	Overall EO Climate
Sexual Harassment & Discrimination	(.830)													
Differential Command Behavior	.606	(.817)												
Positive EO Behavior	.059	.222	(.872)											
Racist Behaviors	.748	.500	-.004	(.844)										
Age Discrimination	.571	.581	.112	.435	(.904)									
Religious Discrimination	.711	.655	.133	.580	.622	(.817)								
Disability Discrimination	.623	.637	.138	.506	.735	.681	(.877)							
Organizational Commitment	.400	.355	.199	.383	.386	.332	.354	(.819)						
Trust in the Organization	.346	.301	.185	.324	.290	.278	.226	.682	(.834)					
Work Group Effectiveness	.269	.281	.251	.234	.215	.266	.264	.367	.400	(.876)				
Work Group Cohesion	.333	.316	.233	.304	.265	.296	.269	.456	.492	.700	(.906)			
Leadership Cohesion	.351	.300	.178	.309	.291	.285	.219	.583	.657	.444	.563	(.936)		
Job Satisfaction	.322	.290	.207	.291	.293	.298	.273	.590	.570	.529	.566	.573	(.830)	
Overall EO Climate	.426	.425	.258	.388	.382	.354	.334	.569	.587	.391	.487	.563	.501	(.933)

Discussion

The DEOCS appears to have high levels of reliability and validity. It is possible to examine Table 2 as a limited multitrait-multimethod matrix (Campbell & Fiske, 1959). In this famous article Campbell and Fiske (1959) proposed several rules to determine whether measures have construct validity

1. Coefficients in the reliability diagonal should consistently be the highest in the matrix.
2. Coefficients in the validity diagonals should be significantly different from zero and high enough to warrant further investigation.
3. A validity coefficient should be higher than values lying in its column and row in the same heteromethod block.
4. A validity coefficient should be higher than all coefficients in the heterotrait-monomethod triangles.
5. The same pattern of trait interrelationship should be seen in all triangles.

The first two rules are met. There is a problem with meeting the third rule is that there is only one method used (the DEOCS questionnaire). The fourth is partly met in that most correlations within the same trait are higher than between different traits. Because there are only two traits examined, the pattern of trait relationships across the triangles cannot be determined. Nevertheless the findings in Table 2 suggest that the DEOCS is valid.

In addition, differences between demographic groups are similar to those found in the MEOCS (Dansby & Landis, 1991). Majority members view EO climate more favorably than minority members. More senior personnel view EO climate more favorably than more junior personnel. These findings further support the validity of the DEOCS:

It is not surprising that those who have historically suffered the most discrimination (minority group members and women report a less favorable EO climate; it is also not surprising that those with more status and power (officers) should have more favorable views of EO climate. (Dansby & Landis, 1998, p.89)

There are some exceptions to this favorable view of the DEOCS. The Differential Command Behavior, Religious Discrimination, and Disability Discrimination scales are somewhat suspect because of high means and low variability. However, these scales still correlate well with other EO scales. The Positive EO Behavior scale correlates poorly with other EO scales. But the Positive EO Behavior items are worded differently than the EO scales. The Positive EO items focus on actions that affirm EO, while the items on the other scales focus on a lack of discrimination or harassment.

Future Directions

The findings of the current study suggest a model for the relationship between scales within the DEOCS. The model presented in Figure 3 divides the scales into two groups: those dealing with EO and those dealing with OE. The exception is the Overall EO Climate scale that seems related to both EO and OE. Testing this model using structural equation is recommended.

The analysis presented in this report has primarily made use of techniques from classical test theory. Analysis using item response theory (Embretson & Reise, 2000) should be performed on the items and the scales.

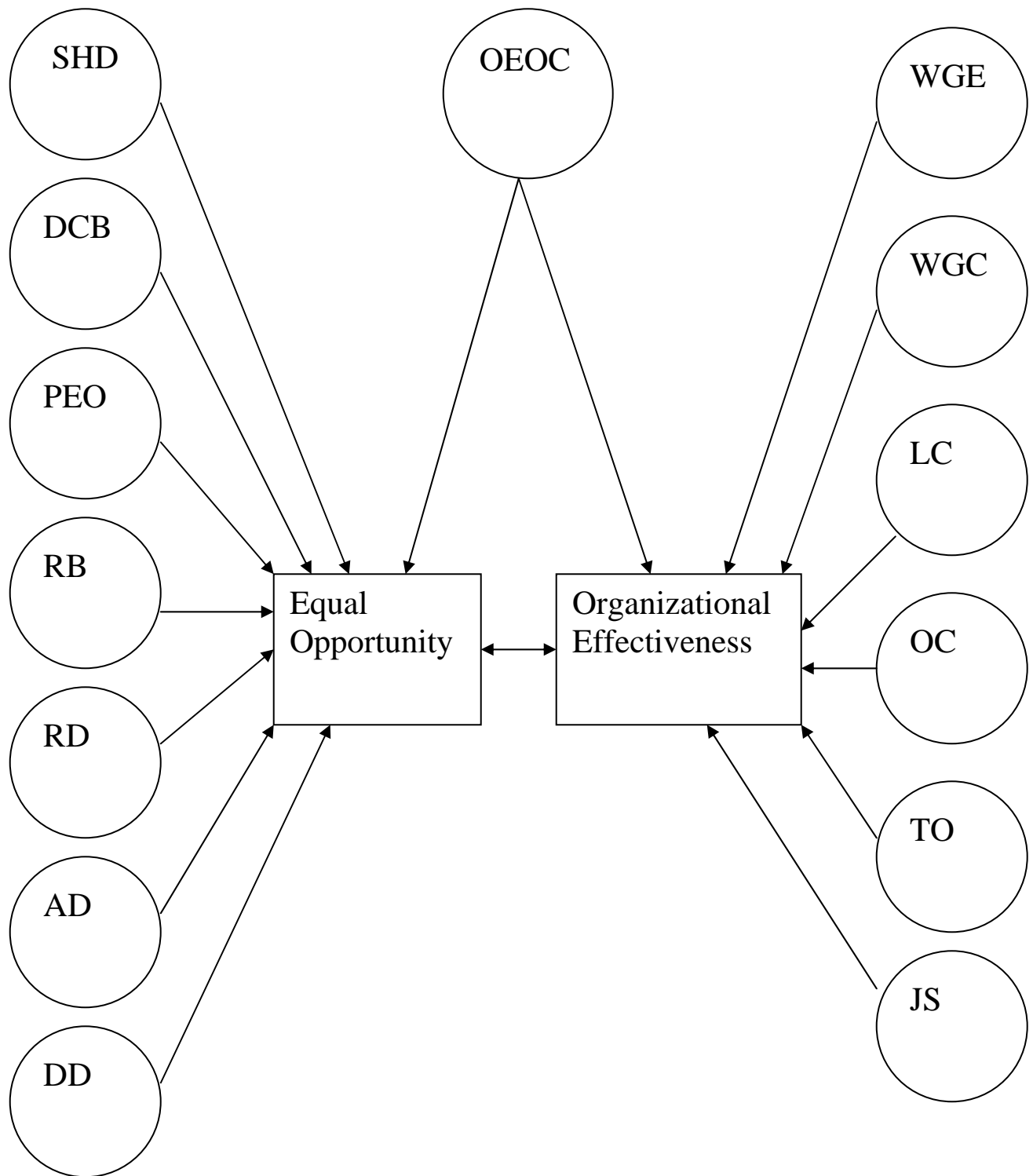


Figure 3
Proposed Model for DEOCS Scales

SHD= Sexual Harassment and Discrimination, DCB= Differential Command Behavior, PEO= Positive EO Behavior, RB= Racist Behavior, RD= Religious Discrimination, AD= Age Discrimination, DD= Disability Discrimination, WGE= Work Group Effectiveness, WGC= Work Group Cohesion, LC= Leadership Cohesion, OC= Organizational Commitment, TO= Trust in the Organization, JS= Job Satisfaction, and OEO= Overall EO Climate

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