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Title

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Permalink

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Journal

Psychiatric Services, 68(2)

ISSN

1075-2730

Authors

Aarons, Gregory A
Ehrhart, Mark G
Torres, Elisa M
[et al.](#)

Publication Date

2017-02-01

DOI

10.1176/appi.ps.201600062

Peer reviewed



HHS Public Access

Author manuscript

Psychiatr Serv. Author manuscript; available in PMC 2018 February 01.

Published in final edited form as:

Psychiatr Serv. 2017 February 01; 68(2): 115–122. doi:10.1176/appi.ps.201600062.

The Humble Leader: Association of Discrepancies in Leader and Follower Ratings of Implementation Leadership with Organizational Climate in Mental Health

Gregory A. Aarons,

University of California, San Diego - Psychiatry, 3020 Children's Way MC-5033 , San Diego, California 92123, Child & Adolescent Services Research Center - San Diego, California

Mark G. Ehrhart,

San Diego State University - Psychology, San Diego, California

Elisa M. Torres,

University of California San Diego Ringgold standard institution - Psychiatry, 9500 Gilman Dr. MC 0812 , La Jolla, California 92093

Natalie K. Finn, and

University of California San Diego Ringgold standard institution - Psychiatry, La Jolla, California

Rinad Beidas

University of Pennsylvania - Psychiatry, 3535 Market Street 3015 , Philadelphia, Pennsylvania 19104

Abstract

Objectives—Discrepancies between leaders' self-ratings and follower ratings of the leader are common but usually go unrecognized. Research on discrepancies is limited but there is evidence that discrepancies are associated with organizational context. This study examined the association of leader-follower discrepancies in Implementation Leadership Scale (ILS) ratings of mental health clinic leaders, and the association of those discrepancies with organizational climate for involvement and performance feedback. Both involvement and performance feedback may be important for evidence-based practice implementation in mental health.

Methods—A total of 593 supervisors (i.e., leaders, n=80) and clinical service providers (i.e., followers, n=513) completed surveys including ratings of implementation leadership and organizational climate. Polynomial regression and response surface analyses were conducted to examine the associations of discrepancies in leader-follower ILS ratings with organizational involvement climate and performance feedback climate, aspects of climate likely to support EBP implementation.

Results—Both involvement climate and performance feedback climate were highest where leaders rated themselves low on the ILS and their followers rated those leaders high on the ILS (i.e., “humble leaders”).

The authors report no conflicts of interest.

This work previously presented at the [blinded] Conference

Conclusions—Teams with “humble leaders” showed more positive organizational climate for involvement and for performance feedback, contextual factors important during EBP implementation and sustainment. Discrepancy in leader and follower ratings of implementation leadership should be a consideration in understanding and improving leadership and organizational climate for mental health services and for evidence-based practice implementation and sustainment in mental health and other allied health settings.

Keywords

leadership; implementation; discrepancy; organizational climate; evidence-based practice

Introduction

There is increasing demand for the use of public health interventions supported by rigorous scientific research, but frequently the promise of such evidence-based practices (EBPs) fails to translate into their effective implementation, sustained use, or intended public health benefits. To bridge this gap between research and effective delivery in practice, researchers increasingly recognize the importance of studying the process of EBP implementation and sustainment (1-4). Although individual provider factors contribute to successful EBP implementation (5), organizational factors are likely to have an equal or greater influence on EBP implementation (6, 7). Leadership is one factor that has been suggested to play an important role in organizational context and implementation of health innovations (8-10).

Organizational climate that supports EBP implementation and sustainment can facilitate implementation, and leadership is an antecedent of organizational culture and climate (11-17). For example, more positive leadership is associated with a climate of involvement, in which followers feel involved in problem solving and organizational decision making (18). Leaders who emphasize the importance of learning, and establish trust with their followers, foster development of a positive feedback climate, which encourages receiving formal and informal performance feedback (19). Leader “credibility” has also been identified as an important facet of feedback climate, as leaders should be knowledgeable about their followers' assigned tasks, in order to accurately judge performance on those tasks (20).

Early research on leadership and implementation focused on general leadership constructs such as transformational leadership (21, 22). Leaders enact transformational leadership through behaviors that embody inspirational motivation, individualized consideration of followers, ability to engender buy-in and intellectual stimulation, and idealized influence or serving as a role model (23). However, research on developing specific types of climates such as safety climate (24, 25) and service climate (26) has increasingly considered leadership focused on the achievement of a specific strategic outcome (e.g., reducing accidents, improving customer service, respectively). Such a strategic leadership approach can also be applied to EBP implementation in the form of implementation leadership (27).

Implementing EBPs can be incredibly challenging and requires specific leader attributes such as being knowledgeable about EBPs, engaging in proactive problem solving, perseverance in the face of implementation challenges, and supporting service providers in

the implementation process. The Implementation Leadership Scale (ILS) was developed as a pragmatic, brief, and efficient (3, 28, 29) measure to assess these leader behaviors thought to promote a strategic climate for implementing and sustaining EBPs (27). The construct of implementation leadership is complementary to general leadership and is the focus of this study that involves “first-level leaders” and their followers. First-level leaders (i.e., those who supervisor others who provide direct services) may be particularly influential in supporting new practices as they are on the frontline directly supervising clinicians and bridging organizational imperatives and clinical service provision as EBPs are integrated into daily work routines (30). However, leaders and followers do not always agree about the leader's behavior.

Research comparing leader and follower leadership ratings has focused on agreement and outcomes related to agreement. For example, Atwater and Yammarino's (31) model of leader-follower agreement posits that congruence in positive leadership ratings are more likely linked to positive outcomes, and conversely, leader-follower agreement in negative leadership ratings are linked to negative outcomes. For leaders who under- or over-estimate their own leadership abilities and skills; findings are equivocal. For example, one set of studies found that leaders who rated themselves lower in relation to others' ratings of them were considered to be more effective as leaders (32, 33). Other studies have shown that leaders who overestimate their leadership abilities tend to use hard persuasion tactics, such as pressure, to influence followers (34). Followers of such leaders are likely to think unfavorably of such hard influence tactics and recognize their leader's erroneous evaluation of their own strengths. Moreover, leaders who overestimate their leadership behaviors, tend to misdiagnose their strengths, adversely affecting their effectiveness as a leader (31). Although these studies have added to an understanding of the different types of disagreement, there has been limited research specifically focusing on leadership discrepancy and its effect on outcomes such as organizational climate. This is an important area of inquiry as recent work has shown that mental health leader-follower discrepancies in transformational leadership ratings can negatively affect organizational culture (35).

The present study, conducted in public mental health organizations, addresses the extent to which leader-follower discrepancies in leadership ratings are related to the organizational climate of the leaders' units, particularly with regard to organizational climate for involvement and performance feedback. Climate for involvement is important because EBP implementation requires participation and buy-in across organizational levels, especially for clinicians and service providers. Indeed, congruence of leadership across multiple levels may also be important during implementation (10). Climate for performance feedback is also critically important for EBP implementation in that feedback and coaching regarding intervention fidelity is a critical part of implementation of many EBPs. For example, in previous work in home-based services, a key implementation strategy was providing feedback through in-vivo coach observation and real-time feedback (36, 37). Thus, it is important to understand how implementation leadership affects organizational involvement climate and feedback climate.

The purpose of the present study was to examine the association of discrepancy between leader (i.e., clinic supervisor) self-ratings and their followers' (i.e., clinical service providers)

ratings on the ILS and the associations of discrepancy with involvement and performance feedback climate in the leaders' teams. Based on past research showing that leaders who underestimate their leadership may be more effective (32, 33), we hypothesized that discrepancies - where leaders rated themselves lower than their follower ratings of them - would be associated with higher levels of climate for involvement and performance feedback.

Methods

Participants

Participants were 753 public mental health team leaders (i.e., leaders) and the service providers that they supervised (i.e., followers), from 31 different mental health service organizations in California. Of the 753 eligible participants, 593 (80 leaders and 513 providers) completed the measures that were used in these analyses (79% response rate). Table 1 provides demographic information about the leaders and providers.

Data Collection Procedures

The research team first obtained permission from agency executive directors or their designees to recruit leaders and their followers for participation in the study. Eligible leaders were identified as those that directly supervise staff in mental health treatment teams or workgroups. Data collection was completed using online surveys or in-person with paper-and-pencil surveys. For online surveys, each participant received a link to the web survey and a unique password via email. For in-person surveys, paper forms were provided and completed at team meetings. In previous research we found no differences in ILS scores by method of survey administration (38). The survey took approximately 20-40 minutes and participants received incentives by email following survey completion. The Institutional Review Board of San Diego State University approved this study. Participation was voluntary and informed consent was obtained from all participants.

Measures

Implementation Leadership Scale (ILS; 27)—The ILS includes 12 items scored on a 0 ('not at all') to 4 ('to a very great extent') scale (27). The ILS includes 4 subscales, Proactive Leadership ($\alpha = .93$), Knowledgeable Leadership ($\alpha = .95$), Supportive Leadership ($\alpha = .90$), and Perseverant Leadership ($\alpha = .93$). The total ILS score ($\alpha = .95$) was created by computing the mean of the four subscales. The complete ILS measure and scoring instructions can be found in the "additional files" associated with the original scale development study (27). Leaders completed self-ratings of implementation leadership and followers completed ratings of their leader's implementation leadership.

Organizational Climate Measure (OCM; 39)—The OCM consists of 17 scales capturing a number of organizational climate dimensions; in the present study we utilized the Involvement ($\alpha = .87$, 6 items) and Performance Feedback ($\alpha = .79$, 5 items) climate scales that measure potentially important aspects of organizational climate for implementation. Clinicians completed scales from the OCM.

Statistical Analyses

Follower ratings were aggregated to create a team-level rating of implementation leadership for each leader. Intraclass correlation coefficients (ICC(1)s) and average within group agreement ($a_{wg(j)}$) statistics (40) supported the aggregation of team ratings (i.e., $(a_{wg(j)}) > .70$). Consistent with Fleenor and colleagues (41) and Shanock and colleagues (42), scores were standardized and scores that differed by .5 standard deviations or more were considered discrepant values.

In order to explore the relationship between discrepancies in leadership ratings and organizational climate (i.e., involvement climate and performance feedback climate), we conducted polynomial regressions response surface analyses (42-44). Consistent with past research using this technique, we focused on the slope and curvature along the $y=x$ and $y=-x$ axes of the response surface because they correspond directly to the substantive research questions of interest. The $y=x$ axis is the axis along which follower and leader ratings are congruent, whereas the $y=-x$ axis is the axis along which follower and leader ratings are incongruent. The relationship between organizational climate and either congruence or incongruence of ILS ratings was then explored by examining the response surfaces of the alignment between leader and follower ratings of implementation leadership and associations with organizational climate.

Results

Means, standard deviations, and correlations among the study variables included in the discrepancy analyses are presented in Table 2. Prior to conducting polynomial regression and response surface analysis for examining discrepancies, ILS data were analyzed to ensure that discrepancies existed in the data (42). Three groups were identified: 31% ($n=33$) of leaders rated themselves higher than their followers rated them, 33% ($n=35$) ratings were in agreement with their followers rating of them, and 36% ($n=38$) leaders rated themselves lower than their followers rated them. Thus over 65% ($n=71$) of the sample showed discrepancies.

Results for the polynomial regression for associations between discrepancy on the ILS and the OCM Involvement scale are provided in Table 3, and the response surface is depicted in Figure 1. The line of incongruence (the dashed line in Figure 1) had a significant slope ($a_3 = -.30$, $t = -3.15$, $p < .01$) and curvature ($a_4 = .42$, $t = 3.47$, $p < .01$). The significant slope indicates that involvement climate scores were higher when leader ILS ratings were low and follower ILS ratings were high compared to when leader ILS ratings were high and follower ILS ratings were low. Thus, Involvement climate was impacted by discrepancy differently depending on who was rating ILS more favorably (i.e., direction of discrepancy matters). The significant positive curvature (i.e., convex surface) shown in Figure 1 shows that involvement climate scores were higher as levels of discrepancy increased. With regard to the line of congruence (the solid line), the slope was non-significant ($a_1 = .12$, $t = 1.24$, $p = .22$), indicating that involvement climate scores were not different when leaders and followers agreed that ILS levels were high versus when ILS levels were low. However, the curvature of the line of congruence was significant, indicating that the lowest levels of involvement occurred when there was agreement at intermediate ILS levels. As a follow-up

analysis to clarify the nature of the findings, we compared the four corner points of the response surface, in line with recommendations of Lee and Antonakis (45). This analysis revealed that Involvement was highest at the left corner of the response surface (labeled A on the graph), where leaders rated themselves low and followers rated the leader high on the ILS. As summarized in Table 4, point A was significantly higher than all other corners of the surface (points B, C, and D), and the other three points were not different from each other.

Table 3 provides the polynomial regression results for the associations between discrepancy on the ILS and the OCM Performance Feedback climate scale, and the corresponding response surface is provided in Figure 2. The line of incongruence (the dashed line in Figure 2) had a significant slope ($a_3 = -.37$, $t = -5.15$, $p < .001$) and curvature ($a_4 = .47$, $t = 6.29$, $p < .001$). The significant slope indicates that performance feedback scores were higher when leader ILS ratings were low and follower ILS ratings were high compared to when leader ILS ratings were high and follower ILS ratings were low. Thus, performance feedback climate was impacted by discrepancy differently depending on who was rating ILS more favorably (i.e., direction of discrepancy matters). The significant, positive curvature (i.e., convex surface) indicates that performance feedback climate scores were higher as levels of discrepancy increased. With regard to the line of congruence (the solid line), the slope was also significant ($a_1 = .16$, $t = 2.249$, $p < .05$), meaning that performance feedback scores were different when leaders and followers agreed that ILS levels were high versus when ILS levels were low. Likewise, the curvature of the line of congruence was significant, indicating that the lowest levels of feedback climate occurred when there was agreement at intermediate ILS levels. Similar to the follow-up analysis conducted for Involvement, we compared the four corner points of the response surface (45). This analysis revealed that Performance Feedback was highest at the left corner of the response surface (labeled A on the graph), where followers rated ILS high and leaders rated themselves low. As summarized in Table 4, point A was significantly higher than all other corners of the surface (points B, C, and D), point B was significantly higher than point D, and none of the other comparisons were significant.

Discussion

We found three almost equally distributed discrepancy/agreement groups: leaders and followers who agreed, leaders who rated themselves more positively than did their followers, and leaders who rated themselves lower than did their followers. We refer to the latter as “humble leaders.” Organizational climate for involvement and climate for feedback were most positive for humble leaders. These findings are consistent with research examining general leadership in other settings (32, 33) and support the effectiveness of humble leaders (46, 47). Moreover, discrepancies were associated with two aspects of organizational climate likely to be important for EBP implementation and sustainment.

Humble leadership was associated with significantly higher involvement climate and performance feedback climate in contrast to leaders who rated themselves high - but followers rated the leaders low. This finding suggests that this leader-follower dynamic, in which leaders rate themselves lower than followers, creates a more positive climate which supports the leader's capacity to implement EBPs. For example, leader humility is associated

with increased follower humble behaviors and the development of shared team process that supports team goal achievement (48). However, the presence of humble leadership does not necessarily mean that EBPs will be implemented effectively. It is likely that effective leadership is a necessary but not sufficient condition for effective implementation and leadership is one component of organizational capacity for implementation (49). Further research is needed to better understand the nuances of how leader-follower discrepancies develop and influence follower experiences of their workplace as well as examining additional factors that may impact effective implementation for both leaders and followers. Qualitative or mixed-methods might be utilized to better understand leader and follower perceptions of leadership and their relationships to implementation climate (50) and to advance leadership and climate improvement strategies.

There are promising interventions for improving leadership and organizational context for implementation. The Leadership and Organizational Change for Implementation (LOCI) intervention (51) combines principles of transformational leadership with implementation leadership to train first-level leaders to develop more positive EBP implementation climate in their teams, while concurrently working with organizations to assure the availability of organizational processes and supports (e.g., fidelity feedback, educational materials, coaching) for effective implementation. Another example is the ARC implementation strategy, that works across organizational levels to improve molar organizational culture and climate (52). In another approach, Zohar and Polacheck (53) demonstrated that providing feedback to leaders about their followers' perceptions of the leader's team's safety climate affected leader verbalizations and behaviors, organizational safety climate, and safety outcomes. Thus, there may be multiple strategies (some extremely low cost/burden) that can be employed to influence leader cognition and behavior, and ultimately improve organizational context and strategic outcomes.

There is a need for brief and pragmatic measures to guide leader development with the goal of changing strategic climate and improving implementation (54). Leader self-ratings can be compared with provider ratings of the leader in order to provide insight to leaders about the degree to which their own perspective is aligned with that of their followers. Thus, the ILS can be used by health and allied health care organizations so that leaders can assess their own leadership for EBP implementation at any stage of the implementation process as outlined in the exploration, preparation, implementation or sustainment (EPIS) implementation framework (1). In the early implementation phases (e.g., exploration and preparation), leaders might be provided training in effective leadership to support EBP implementation. Such an implementation strategy could contribute to facilitating the implementation process.

Some limitations of the present study should be noted. First, this study focused on organizational climate supportive of implementation context as the distal outcome. Future studies of implementation leadership should examine additional outcomes such as implementation effectiveness, innovation effectiveness, and patient outcomes (55, 56). Second, this study was conducted in mental health organizations. Generalizability of these findings should be examined through replication in other health and allied health service sectors. Third, in the present study there were apparent differences in race/ethnicity

distribution for the samples of leaders and followers. There have been calls for leadership research to examine the degree to which such differences impact perceptions, relative power, and causality (57). While beyond the purview of the present study, we recommend future more detailed examination of these issues. Finally, the data were cross-sectional; future research should examine these relationships prospectively in addition to examining whether leader interventions may affect leader-follower discrepancies.

Effective EBP implementation and sustainment is critical to improve the impact of effective interventions. Sadly, many implementation efforts fail or do not deliver interventions with the needed rigor or fidelity. It is critical to understand how health care organization leaders and providers interact to create an organizational climate conducive to effective implementation and sustainment. The present study demonstrated that discrepancy does matter in its impact on organizational climate relevant for EBP implementation. Leadership and organizational interventions to improve implementation and sustainment should be further developed and tested in order to advance implementation science and improve the public health impact of investments in clinical intervention development.

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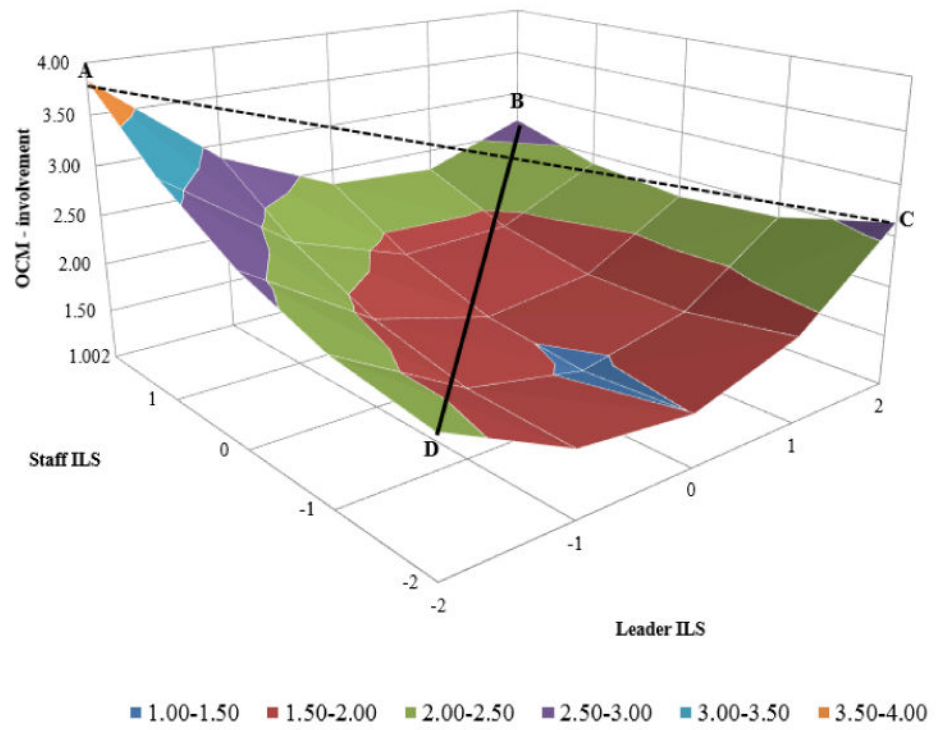


Figure 1. Response Surface for Involvement Climate predicted from discrepancy between leader and follower ratings of Implementation Leadership Scale Scores.

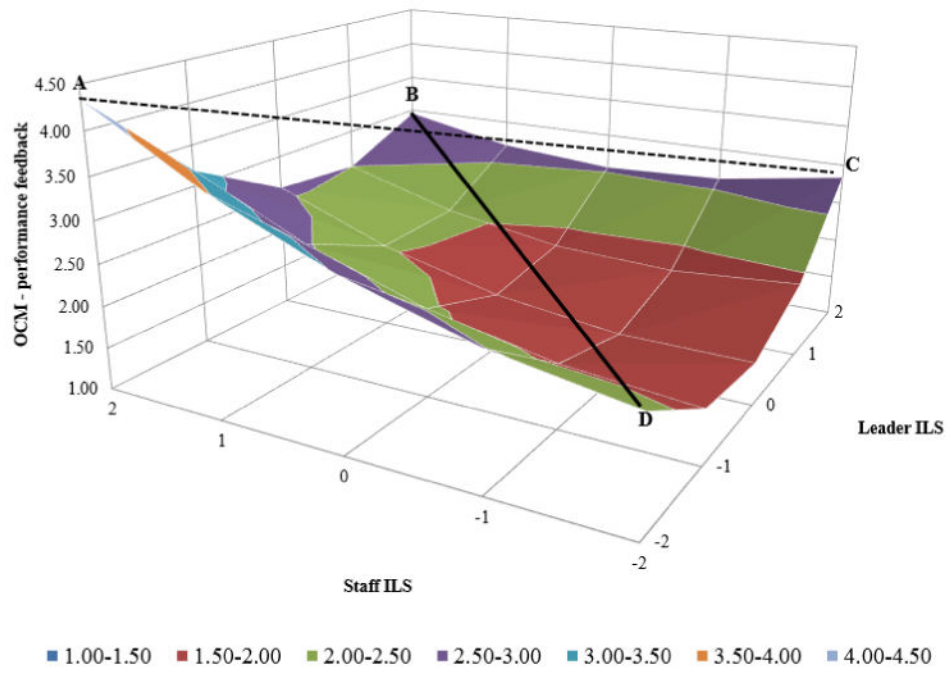


Figure 2. Response Surface for Performance Feedback Climate predicted from discrepancy between leader and follower ratings of Implementation Leadership Scale Scores.

Table 1
Participant Demographics

	n	Leaders	N	Providers (Followers)
Age in Years		45.4		37.3
Years of Experience		13.8		6.2
Years in Agency		5.9		3.2
Gender				
Male	20	25%	119	23%
Female	60	75%	394	77%
Race				
Caucasian	57	71%	214	44%
African American	3	4%	85	17%
Asian American	9	11%	28	6%
Other	11	14%	165	34%
Hispanic	10	13%	214	42%
Educational level				
High School	-	-	14	3%
Some college	3	4%	48	9%
Bachelor's degree	1	1%	117	23%
Some graduate work	1	1%	38	7%
Master's degree	69	86%	290	57%
Doctoral degree	6	8%	6	1%
Major of highest degree				
Marriage/Family Therapy	20	25%	108	22%
Social Work	4	5%	56	11%
Psychology	2	3%	34	7%
Child Development	2	3%	31	6%
Human Relations	38	48%	144	29%
Other	14	17%	118	24%

Note: $N=593$; $n=513$; leaders $n=80$; providers (i.e., followers).

Table 2
Means, Standard Deviations, and Correlations among Study Variables

	Mean	<i>sd</i>	1	2	3	4
1. Provider ILS ratings	2.42	.79	--			
2. Leader ILS ratings	2.39	.92	.17	--		
3. OCM - Involvement	1.81	.48	.27**	-.06	--	
4. OCM - Performance Feedback	1.95	.43	.31**	-.09	.64**	--

Note:

* $p < .05$

** $p < .01$

Table 3
Polynomial Regression and Response Surface Analysis Results

OCM Involvement and Implementation Leadership		
Variable Regressed onto OCM Involvement	<i>b</i>	<i>se</i>
Constant	1.56**	.10
Implementation Leadership: Leader	-.09	.06
Implementation Leadership: Team	.21**	.07
Implementation Leadership: Leader squared	.23**	.07
Implementation Leadership: Leader x Team	-.10*	.04
Implementation Leadership: Team squared	.09	.10
<i>R</i> ²	.18	
Response Surface Tests		
<i>a</i> ₁	.12	.10
<i>a</i> ₂	.22**	.08
<i>a</i> ₃	-.30**	.10
<i>a</i> ₄	.42**	.12
OCM Performance Feedback and Implementation Leadership		
Variable Regressed onto OCM Performance Feedback	<i>b</i>	<i>se</i>
Constant	1.69**	.07
Implementation Leadership: Leader	-.11*	.05
Implementation Leadership: Team	.27**	.56
Implementation Leadership: Leader squared	.27**	.06
Implementation Leadership: Leader x Team	-.12**	.03
Implementation Leadership: Team squared	.09	.07
<i>R</i> ²	.37	
Response Surface Tests		
<i>a</i> ₁	.16*	.07
<i>a</i> ₂	.23**	.08
<i>a</i> ₃	-.37**	.07
<i>a</i> ₄	.47**	.08

Note: N = 80

*
 $p < .05$

**
 $p < .01$

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Table 4
Tests of Equality Between Predicted Values for Response Surfaces for Figure 1 (OCM Involvement) and Figure 2 (OCM Performance Feedback)

	OCM Involvement	OCM Performance Feedback
	Predicted Value at Specific Point	
A	3.84	4.33
B	2.67	2.95
C	2.64	2.84
D	2.20	2.30
	Test of Equality Between Predicted Values	
Along the edges of the surface	F-statistic	
A vs. B	7.09 [*]	11.23 ^{**}
B vs. C	.01	.07
C vs. D	.98	1.66
D vs. A	11.33 ^{**}	20.83 ^{**}
Along diagonal lines		
A vs. C	10.38 ^{**}	26.42 ^{**}
B vs. D	2.70	9.17 [*]

Note: df for all F-statistics is (1, 74)

*
 $p < .05$

**
 $p < .001$