Exploring Employee Readiness for Change in a State Extension System

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Abstract
Understanding factors that influence employee readiness for change is essential for successful organizational change. We examined variables linked to employee readiness for change in one state's Extension system. Results revealed high-quality employee-supervisor relationships, neither high nor low levels of resistance to change, and somewhat high levels of readiness for change. Respondents with more years of service, more time working for their current supervisors, and greater resistance to change reported lower levels of readiness for change. We share implications in an effort to help increase successful organizational change efforts.

Introduction

Extension organizations face increasing pressures to respond more adeptly than ever to societal, economic, and technological changes (Extension Committee on Organization and Policy, 2010). Given the "graying of America," increasing population diversity, volatile financial cycles, and technology evolution and extinction, Extension, like all organizations, must successfully manage and implement change to survive and thrive in today's hyperreactive economic, political, and sociocultural environments (Grieves, 2010; Kotter & Cohen, 2012). For Extension professionals, calls for state Extension organizations to speed up their rates of transformation come from a number of voices (Franz & Cox, 2012; Morse, 2009; Seger & Hill, 2016; Smith & Torppa, 2010; Strong, Rowntree, Thurlow, & Raven, 2015).

Viewed through an organizational development lens, organizational change is "a set of behavioral science–based theories, values, strategies, and techniques aimed at the planned change of the organizational work setting for the purpose of enhancing individual development and improving organizational performance through the alteration of organizational members' on-the-job behaviors" (Porras & Roberston, 1992, p. 723). Creating employee readiness for change and overcoming resistance to change are foundational prerequisites for effective organizational change management (Cummings & Worley, 2009).

According to Oreg (2003, 2006), a good deal of employee resistance to change is based on individuals'
dispositional tendencies. Some resist change regardless of what the change may be. Such individuals approach organizational change with skepticism and trepidation. On the other hand, some welcome change and embrace it quickly and easily.

Building on Lewin's (1947) well-known process model of unfreeze-change-refreeze, Armenakis, Harris, and Mossholder (1993) identified the readiness-for-change concept as the "cognitive precursor to the behaviors of either resistance to, or support for, a change effort" (pp. 681–682). These researchers contended that creating "readiness for change may act to preempt the likelihood of resistance to change, increasing the potential for change efforts to be more effective" (Armenakis et al., 1993, p. 682). They further asserted that "framing a change project in terms of readiness seems more congruent with the image of proactive managers who play the roles of coaches and champions of change" (Armenakis et al., 1993, p. 682).

As organizational leaders, supervisors play an essential change-agent role. They have primary responsibility for clearly communicating why a change is necessary and what the new organizational vision is and for eliciting a desired performance from employees (Kotter, 1996).

**Employee-Supervisor Relationship Quality**

Studies have shown that the employee-supervisor relationship affects a number of key organizational success factors, such as work quality, organizational commitment, and organizational citizenship behaviors (Furst & Cable, 2008; Ilies, Nahrgang, & Morgeson, 2007; Liden, Wayne, & Sparrowe, 2000). Stringer (2006) found that employees who had high-quality relationships with their supervisors reported high job satisfaction based on mutual trust, support, and communication. This job satisfaction allowed them to accomplish more and make larger contributions to the success of their organizations. A 2007 study by Erdogan and Enders also revealed positive organizational impacts related to employee-supervisor relationship quality: When supervisors perceived high organizational support, the quality of employee-supervisor relationships was also high, contributing to increased job performance. When employee performance improves so too does overall organizational performance (Graen & Uhl-Bien, 1995).

**Leader-Member Exchange Theory**

Leader-member exchange (LMX) theory is a useful tool for helping explain variations in employee-supervisor relationship quality. It also can help Extension organizational development professionals make predictions about expected outcomes given those variations. High-quality employee-supervisor relationships are based on mutual trust, support, coaching, and mentoring. Evidence has shown that when supervisors support employee autonomy, employees are more satisfied and engaged, have higher trust, and feel less stress (Baard, Deci, & Ryan, 2004; Deci, Connell, & Ryan, 1989; Gagné, Koestner, & Zuckerman, 2000). Supervisors who excel at fostering and maintaining high-quality relationships with their employees do not subscribe to the "command and control" mentality of management. LMX theory suggests that supervisors can be trained to develop high-quality relationships (characterized by mutual reciprocity, respect, and trust) with each of their employees and that when they do, follower performance improves dramatically (Dansereau, Graen, & Haga, 1975; Graen & Scandura, 1987; Graen & Uhl-Bien, 1995).

**Study Description and Methods**

Understanding how employee-level variables influence, enable, support, and promote organizational change is
essential, then, for developing and implementing successful organizational change initiatives. Results presented here relate to factors believed to affect perceptions of employee readiness for change, focusing on variables at the individual level. Variables included employee-supervisor relationship quality, basic psychological needs satisfaction at work, dispositional resistance to change, readiness for change, and demographic characteristics (age, gender, educational attainment, job group, years of service, program area, and duration of the employee-supervisor relationship).

**Research Questions**

Study results reported in this article are part of a larger investigation of one state's Extension system. The relevant research questions were as follows:

1. What are the associations among employee-supervisor relationship quality, basic psychological needs satisfaction at work, dispositional resistance to change, and readiness for change?

2. Do employees differ by demographic characteristics with regard to their perceptions of the overall quality of their relationships with their supervisors and their readiness for change?

**Research Methods**

The sample frame comprised all employees of Ohio State University Extension who had at least a 25% or greater Extension-funded appointment \( N = 756 \). Permissions and approvals were obtained from Ohio State University Extension administration and the university's human subjects institutional review board.

Data were gathered in two steps.

1. Demographic data for six of the seven demographic variables were collected via the organization's human resources database (the seventh, duration of the employee-supervisor relationship, was addressed in step two).

2. Employee perceptions were assessed through a web-based, self-administered questionnaire (via Qualtrics). The questionnaire included four established measures with proven reliability and validity psychometrics:

   - **7-item Leader-Member Exchange Scale** (Graen & Scandura, 1987). Respondents indicated their agreement with statements using a 5-point Likert-type scale. Sample items are "My manager recognizes my potential," "I usually know where I stand with my manager," and "I can count on my manager to 'bail me out' even at his/her own expense, if I really need it."

   - **21-item Basic Psychological Needs Satisfaction at Work Scale** (Deci et al., 2001). Respondents indicated their perceptions of the truth of statements using a 7-point Likert-type scale \( 1 = \text{not at all true}, 7 = \text{very true} \). Sample items are "I feel like I can make a lot of input into deciding how my job gets done," "People at work tell me I am good at what I do," and "People at work care about me."

   - **16-item Resistance to Change Scale** (Oreg, 2003). Respondents indicated their agreement with statements using a 6-point Likert-type scale. Examples items are "I generally consider change to be a negative thing," "I'd rather be bored than surprised" (reverse scored), and "Once I've come to a conclusion, I'm not likely to
change my mind."

- **14-item Readiness for Change Scale (Madsen, John, & Miller, 2005).** Respondents indicated their likelihood of engaging in organizational change activities using a 7-point Likert-type scale (1 = very unlikely, 7 = very likely).

Recommendations from Archer (2003, 2008) and Monroe and Adams (2012) for increasing the response rate for online surveys among Extension employees guided survey implementation. Participants received an email invitation from the lead researcher and state Extension director. Employees voluntarily clicked the survey link and consented to participate before completing the questionnaire. Three reminder emails were sent. The overall response rate was 74% (n = 559). Seventy-six responses were not included because of excessive missing data, resulting in a total of 483 responses (64% of the target population). Due to occasional missing data, not all analyses total 483.

Instrument reliability was checked post hoc through the computing of Cronbach's alpha from the study data (Miller, 2009). The estimates of internal consistency aligned with previously obtained empirical results, ranging from .83 to .91, indicating that all measures were reliable.

For assessing potential nonresponse error, early respondents were compared to late respondents on scale scores via an independent-samples *t*-test (Miller & Smith, 1983). The *p*-value for each of the calculated *t*-values for each scale score was higher than an alpha level of .05 (two-tailed); therefore, we determined that nonresponse error was not a factor.

### Results

The primary data analysis techniques, which we performed using SPSS version 21, included compiling descriptive statistics, determining Pearson product-moment correlations, and conducting analysis of variance.

### Sample Description

The average age of respondents was 49.1 years and ranged from 21.4 to 72.2 years (median age = 51.2). About three fourths (73%) of the respondents were female, and 27% were male. These age and gender statistics reflected those of the target population. Refer to Table 1 for descriptive statistics of the other demographic variables.

<table>
<thead>
<tr>
<th>Demographic variable</th>
<th>No.</th>
<th>%</th>
<th>M</th>
<th>SD</th>
<th>Median</th>
<th>Mode</th>
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<tr>
<td><strong>Duration of employee-supervisor relationship (in years)</strong></td>
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<td>5</td>
<td>2</td>
<td>1</td>
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<td></td>
</tr>
<tr>
<td>0–1.9</td>
<td>192</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2–5.9</td>
<td>173</td>
<td>36</td>
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<tr>
<td>6–10.9</td>
<td>73</td>
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<td>Years of service</td>
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<td>16–20.9</td>
<td>21–33</td>
<td>Total</td>
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<td></td>
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<tr>
<td></td>
<td>24</td>
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<td>10</td>
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<td></td>
<td>119</td>
<td>75</td>
<td>72</td>
<td>77</td>
<td>62</td>
<td>41</td>
<td>28</td>
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<th>33</th>
<th>105</th>
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<th>64</th>
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<td></td>
<td>17</td>
<td>7</td>
<td>22</td>
<td>41</td>
<td>13</td>
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<th>Job group</th>
<th>194</th>
<th>155</th>
<th>124</th>
<th>10</th>
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<tr>
<td></td>
<td>40</td>
<td>32</td>
<td>26</td>
<td>2</td>
</tr>
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<thead>
<tr>
<th>Program area</th>
<th>105</th>
<th>101</th>
<th>20</th>
<th>112</th>
<th>145</th>
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<tr>
<td></td>
<td>22</td>
<td>21</td>
<td>4</td>
<td>23</td>
<td>30</td>
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</tbody>
</table>

**Note.** Grouped frequency distributions for the continuous data for years of service and duration of the employee-supervisor relationship are presented for summary purposes only. Continuous data were used in all calculations. ANR = agriculture and natural resources; CD = community development; FCS = family and consumer sciences.
Psychometric Measures

The mean, standard deviation, median, and range for each of the four scales are presented in Table 2. Study participants reported high-quality relationships with their supervisors and perceived that their basic psychological needs at work were satisfied more often than not. Respondents had neither high nor low levels of resistance to change and somewhat high levels of readiness for change.

Table 2.
Descriptive Statistics of Sample Psychometric Measures

<table>
<thead>
<tr>
<th>Psychometric variable</th>
<th>No.</th>
<th>M</th>
<th>SD</th>
<th>Median</th>
<th>Min</th>
<th>Max</th>
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<tbody>
<tr>
<td>Employee-supervisor relationship quality</td>
<td>437</td>
<td>21.6</td>
<td>4.8</td>
<td>22.0</td>
<td>8</td>
<td>28</td>
</tr>
<tr>
<td>Basic psychological needs satisfaction</td>
<td>481</td>
<td>5.5</td>
<td>.79</td>
<td>5.6</td>
<td>2.7</td>
<td>6.9</td>
</tr>
<tr>
<td>Resistance to change</td>
<td>459</td>
<td>3.1</td>
<td>.69</td>
<td>3.1</td>
<td>1.21</td>
<td>5.38</td>
</tr>
<tr>
<td>Readiness for change</td>
<td>472</td>
<td>5.4</td>
<td>.75</td>
<td>5.5</td>
<td>1.92</td>
<td>6.93</td>
</tr>
</tbody>
</table>

Associations Related to Psychometric Measure Variables

We sought to determine relationships related to employee-supervisor relationship quality, basic psychological needs satisfaction, dispositional resistance to change, and employee readiness for change.

Results of the bivariate (Pearson product-moment) correlations among these variables revealed the statistically significant relationships ($p < .01$, two-tailed) identified here; Davis (1971) conventions describe the magnitudes of relationships between variables:

- a substantial positive association (.54) between employee-supervisor relationship quality and basic psychological needs satisfaction,

- a moderate negative association (−.32) between dispositional resistance to change and readiness for change,

- low positive associations (.20 and .21, respectively) between employee-supervisor relationship quality and readiness for change and between basic psychological needs satisfaction and readiness for change, and

- a low negative association (−.26) between dispositional resistance to change and basic psychological needs satisfaction.
Group Differences

We also investigated whether employees differed by demographic characteristics with regard to their perceptions of the overall quality of their relationships with their supervisors and readiness for change. We used Pearson product-moment correlations and one-way analysis of variance with post hoc analyses to examine the relationships between these variables.

Employee-Supervisor Relationship Quality

In regard to perceptions of quality of the employee-supervisor relationship, no significant relationships were found for age, gender, years of service, program area, or duration of the employee-supervisor relationship. Cell sizes for job groups were too small to include in the difference analysis. Significant differences were found among the educational attainment groups relative to relationship quality scores (see Table 3). The Tamhane’s T2 post hoc analysis (equality of variance not assumed; Welch = 3.8, p < .01) revealed that respondents with a master's degree had employee-supervisor relationship quality scores that were, on average, 2.1 points lower than those of respondents with a bachelor's degree (p < .01) and 1.9 points lower than those of respondents with a high school diploma or GED (p < .05). It is important to note that most employees with a master's degree are county Extension educators.

Table 3.
Impact of Educational Attainment on Employee-Supervisor Relationship Quality

<table>
<thead>
<tr>
<th>Educational attainment (F = 3.84, p &lt; .01)</th>
<th>Employee-supervisor relationship quality</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>High school diploma or GED</td>
<td>76</td>
</tr>
<tr>
<td>Associate's/2-year college degree</td>
<td>28</td>
</tr>
<tr>
<td>Bachelor's degree</td>
<td>93</td>
</tr>
<tr>
<td>Master's degree</td>
<td>168</td>
</tr>
<tr>
<td>Doctorate</td>
<td>59</td>
</tr>
</tbody>
</table>

Readiness for Change

We found significant negative associations between readiness for change and (a) years of service ($r = -.11, p < .01$) and (b) duration of the employee-supervisor relationship ($r = -.12, p < .01$). Employees with more years of service and those who had worked for their supervisors for more years had lower levels of readiness for change.

Additionally, there were significant gender and program area group differences related to readiness for change (see Table 4). Females, on average, had readiness for change scores .22 points higher than males' readiness for change scores. Regarding program area groups, Tamhane's T2 post hoc analysis (equality of variance not assumed; Welch = 3.7, p < .01) revealed that those in the family and consumer sciences (FCS) program area had readiness for change scores that were, on average, .29 points higher than those in the agricultural and natural resources (ANR) program area.
Table 4.
Impact of Gender and Program Area on Readiness for Change

<table>
<thead>
<tr>
<th>Demographic variable</th>
<th>Readiness for change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>Gender (F = 4.53, p &lt; .01)</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>333</td>
</tr>
<tr>
<td>Male</td>
<td>128</td>
</tr>
<tr>
<td>Program area (F = 4.93, p &lt; .001)</td>
<td></td>
</tr>
<tr>
<td>4-H</td>
<td>99</td>
</tr>
<tr>
<td>ANR</td>
<td>99</td>
</tr>
<tr>
<td>CD</td>
<td>20</td>
</tr>
<tr>
<td>FCS</td>
<td>108</td>
</tr>
<tr>
<td>None; support role</td>
<td>135</td>
</tr>
</tbody>
</table>

*Note.* ANR = agriculture and natural resources; CD = community development; FCS = family and consumer sciences.

Discussion

The 483 Extension employees who participated in our study reported high-quality relationships with their supervisors: The average relationship score was 21.57 (±4.8 points) on a scale that ranged from 7 to 28. According to LMX theory, high-quality employee-supervisor relationships are characterized by peer-to-peer equity rather than superior-subordinate hierarchy. The high-quality employee-supervisor relationships reported here indicate high degrees of mutual trust, liking, latitude, loyalty, and support.

In high-quality relationships, employees are willing to, and usually do, exert extra effort because they feel empowered and motivated to take personal initiative (Graen & Uhl-Bien, 1995). Low-quality employee-supervisor relationships, on the other hand, are contractual in nature, meaning employees comply with directives out of formal obligation and motivation to act in their own self-interests due to the economic rewards the supervisor controls. Our finding that study participants had high-quality relationships with their supervisors suggests that today's Extension organizational supervisors and leaders who participated in the study described here heeded Patterson's (1997, 1998) admonishments to move beyond 100-year-old command-and-control management philosophies and practices (i.e., Taylor, 1911).

Between-group differences relative to level of educational attainment were found for employee perceptions of the quality of their relationships with their supervisors. Respondents with a master's degree had relationship scores that were, on average, 2.1 points lower than those of respondents with a bachelor's degree, and 1.9 points lower than those of respondents with a high school diploma or GED. Consistent with previous studies, no differences were identified for age, gender, years of service, program area, or duration of the employee-supervisor relationship with regard to employee-supervisor relationship quality scores.
The difference between educational groups (lower scores for those with a master's degree than for those with a bachelor's degree or high school diploma/GED) may be due to the physical proximity of these groups of employees to their supervisors and the associated opportunities for interaction. In the Ohio State University Extension system, typically unit leaders supervise employees with high school diplomas/GEDs or bachelor's degrees, and they share space in the same office. Interactions are frequent. On the other hand, regional directors supervise employees with master's degrees. Due to geographic separation, regional directors and the employees they supervise interact infrequently. Although the difference between educational groups was statistically significant, the scores were all on the high end of the LMX scale, indicating relatively high-quality employee-supervisor relationships overall.

Employees with more years of service and those who had worked for a longer period of time with their current supervisors exhibited lower levels of readiness for change. Additionally, significant gender and program area group differences were identified. Females, on average, had readiness for change scores .22 points higher than those of males (5.50 vs. 5.28, respectively). Considering program area groups, those in the FCS program area had readiness for change scores that were, on average, .34 points higher than those in the ANR program area (5.57 vs. 5.23, respectively). These findings echo those by Tondl (1991), who reported that male county agents in Nebraska perceived the need for change and openness to change negatively, whereas female county agents viewed these dimensions positively. Additionally, females' responses to questionnaire items assessing likelihood of participating in organizational change activities were more positive than males' responses (Tondl, 1991). It is important to note that although statistically significant, the practical significance of the between-group differences found in our study is suspect, especially in light of the fact that these point differentials are subsumed within the standard deviation (.75) for the overall score.

**Implications**

Given the results of our study, Extension organizational/professional development personnel should help supervisors develop skills and techniques related to focusing on and building that which employees already do well rather than controlling what employees should be doing. This assistance should include helping supervisors become adept at "learning to live with the paradox of being in control and not in control simultaneously" (Karp & Helgø, 2008, p. 95). Such efforts might follow suggestions of Stone, Deci, and Ryan (2009) regarding six key supervisor actions:

1. "ask open questions and invite participation in problem solving;

2. actively listen and acknowledge employee perspectives;

3. offer choices within structure, including the clarification of responsibilities;

4. provide sincere, positive feedback that acknowledges initiative and factual, nonjudgmental feedback about performance;

5. minimize coercive controls such as rewards and comparisons with others; [and]

6. develop talent and share knowledge to enhance competence and autonomy" (p. 80).
Conclusion

In conclusion, the knowledge generated by our research on employee readiness for change in relation to employee-supervisor relationship quality and dispositional resistance to change enables Extension leaders to craft more effective organizational change interventions. High-quality employee-supervisor relationships characterized by mutual reciprocity, trust, and support contribute to readiness for change. It should be noted, however, that although statistically significant relationships were found, the overall magnitudes of associations were low to negligible. This finding suggests that further research is needed.

References


