

Leadership and Upward Influence in  
NSF I/UCRCs:  
Report to Evaluator's June 2006

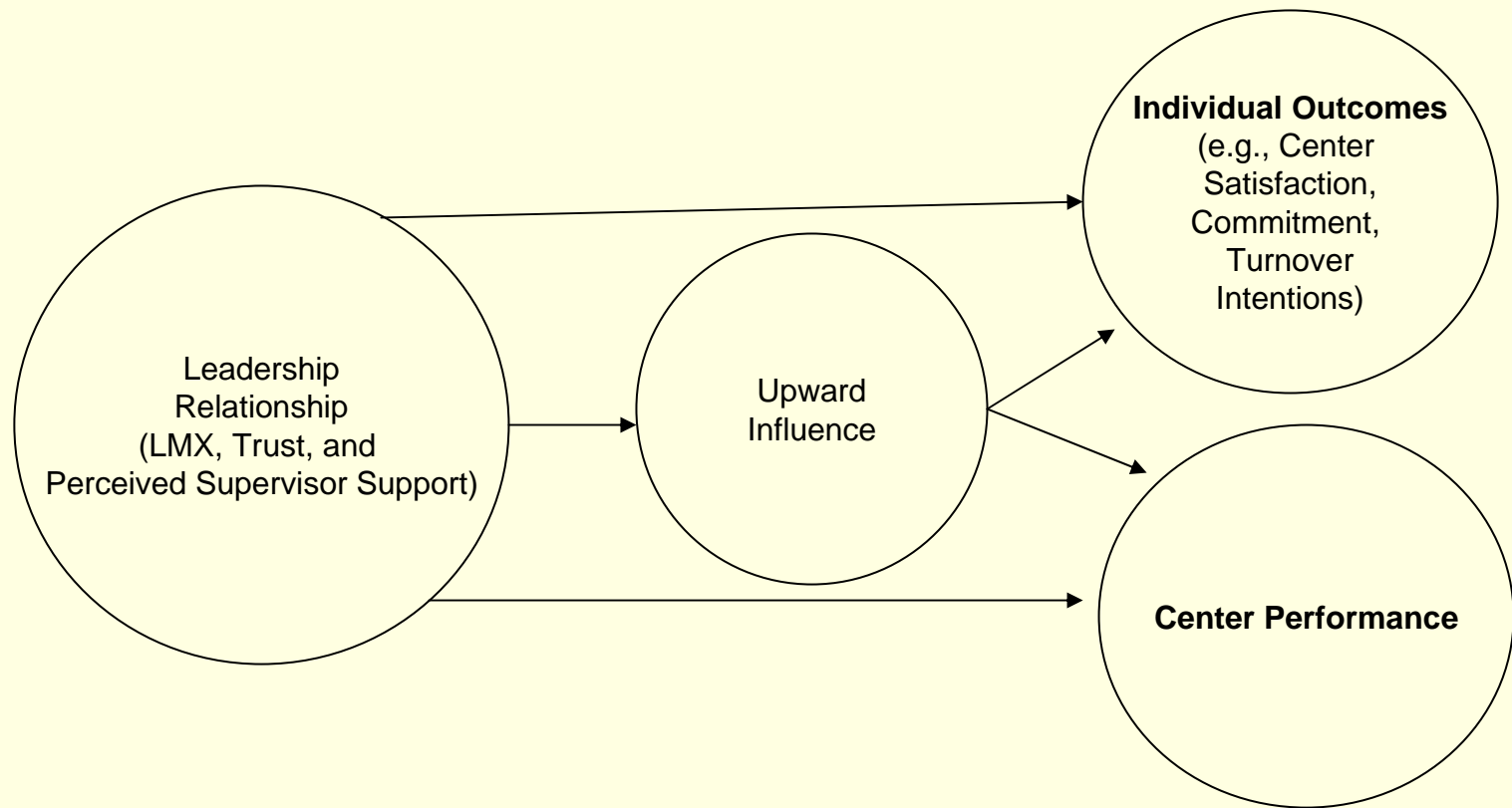
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# Objectives

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- Identify leadership relationship and upward influence behaviors that contribute to important outcomes for I/UCRC directors and the university administrators to whom they report
- Identify best practices that represent effective leadership relationships and upward influence and share them with center directors (and university administrators?) involved in the NSF I/UCRC program

# Leadership and Influence Model



# Methods

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- Pilot interviews with 4 center directors
- Developed Web-based survey
- Emailed invitations to center and site directors
- Contacted directors for university administrator information
- Emailed invitations to university administrators
- Phone and email reminders to directors and administrators

# Sample

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- 126 center directors were invited to respond;  
112 responded (88.8%);  
96 (76.2%/85.7%) provided usable questionnaires
- 85 university administrators were invited to respond;  
59 responded (69.4%);  
52 (61.2%/88.1%) provided usable questionnaires
- 47 centers, 63 universities
- 24 single site centers, 23 multi-site centers

# Center Director Demographics

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- Average length of time as center director: 4.20 years
- Average length of time in relationship with university administrator: 4.75 years
- 13 center directors reported moving their center since its founding

# Measures

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- Leadership relationship: LMX-7 (Graen et al., 1982)
- Perceived supervisor support: Survey of Perceived Organizational Support (SPOS) (Eisenberger et al., 1986)
- Trust : McAllister (1995)
- Leadership relationship (Index containing LMX, perceived supervisor support, and trust)
- Influence tactics and influence effectiveness: Influence Behavior Questionnaire (IBQ) (Yukl et al., 1991)
- Satisfaction with center, research, IAB: items created for this study
- Center commitment: Organizational Commitment Questionnaire (OCQ; Mowday et al., 1979; Porter et al., 1974)
- Turnover intentions (intention to quit university, directing center: Michigan Organizational Assessment Questionnaire (MOAQ; Cammann et al., 1983)
- Center performance: NCSU evaluation base; performance rating using 5 items created for this study

# CD and UA Rater Agreement

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- Satisfaction with center ( $r = .34^*$ )
- Center commitment ( $r = .40^{**}$ )
- Upward influence effectiveness ( $r = .21, ns$ )
- Trust ( $r = .47^{**}$ )
- LMX ( $r = .38^{**}$ )

# Center Director Outcomes

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- Significant direct leadership relationship:
  - Upward influence effectiveness
  
- Significant leadership relationship partially mediated by upward influence effectiveness (i.e., model predicts accurately):
  - Satisfaction with center research
  - Satisfaction with university administrator
  - Commitment to center
  - Enhanced R&D
  - UA perceptions of relationship with CD
  - Resources provided by UA
  
- Non-significant predictions
  - Intention to quit directing center or university
  - NCSU indicators of center performance

# University Administrator Outcomes

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- Significant direct leadership relationship:
  - Upward influence
  - Center performance (I/UCRC compared to other centers and directors)
- Significant leadership relationship partially mediated by upward influence effectiveness predicts:
  - Satisfaction with center research
  - Satisfaction with interactions

# Effectiveness of Upward Influence Practices on University Administrator Outcomes

(N = 52)<sup>1</sup>

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- Upward Influence Effectiveness (see Table 1)
  - Rational persuasion ( $r = .51^{**}$ )
  - Inspirational appeal ( $r = .44^{**}$ )
  - Consultation ( $r = .42^{**}$ )
  - Collaboration ( $r = .53^{**}$ )

<sup>1</sup> \*  $p < .05$ , \*\*  $p < .01$ , two tailed test

# Effectiveness of Upward Influence Practices on University Administrator Outcomes (cont.)

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- Satisfaction with I/UCRC
  - Upward influence effectiveness ( $r = .36^{**}$ )
- Commitment to I/UCRC
  - Rational persuasion ( $r = .36^{**}$ )
  - Inspirational appeal ( $r = .41^{**}$ )
  - Consultation ( $r = .38^{**}$ )
  - Upward influence effectiveness ( $r = .35^{**}$ )

# Effectiveness of Upward Influence Practices on University Administrator Outcomes (cont.)

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- Center performance rating (I/UCRC compared to other centers and directors)
  - Rational persuasion ( $r = .38^{**}$ )
  - Apprising ( $r = .35^{**}$ )
  - Inspirational appeal ( $r = .48^{**}$ )
  - Consultation ( $r = .33^*$ )
  - Collaboration ( $r = .31^*$ )
  - Upward influence effectiveness ( $r = .43^{**}$ )

# Implementation of Results at JAN 2007 Center Director Meeting

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- Distribute handout of recommended leadership and upward influence practices to center directors and discuss their use in a breakout session
- Collect suggestions for core relationships to examine in new study

# New Research

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- Identify and unpack center director leadership relationships with others
- Focus on core relationships and behaviors associated with effective influence
- Telephone interviews to discover core relationship behaviors, followed by
- Internet survey to rate frequency of behaviors and their impact on outcomes
- Submit current final report before submission of new proposal (Submit proposal SEP 2006 to start research JAN 2007)