ADVANCE

University of Rhode Island

Promoting Climate Change: A Model for Advancing Women in Science

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Presented at the
Association for Women in Psychology 2005 Conference
Tampa, Florida February 26, 2005

***National Science Foundation* Institutional Transformation Award SBE-0245039**

Women are . . .

- 22% of science & engineering workforce
- < 20% of S&E faculty in 4-year institutions
- 2% of S&E faculty if minority

At URI, women are. . .

- 16% (N=37) of full-time, ranked STEM faculty

Why aren't there more women in science?

- Pipeline problem *(not enough women entering fields)*
- Child care problem *(cannot find adequate time)*
- Values problem *(unwilling to focus solely on career)*
- Acculturation problem *(lack knowledge about how to succeed)*
- Gender schemas *(stereotypes about appropriate roles)*
- Accumulation of disadvantage *(minor setbacks & acts of subtle discrimination add up over time)*

As summarized by Virginia Valian, PhD, Psychologist at CUNY Hunter College, and author of *Why So Slow: The Advancement of Women*

Research shows:

- Fewer interactions/collaborations with faculty
- Lower salaries
- Fewer resources
- Heavier teaching loads
- Less mentoring
- Less job satisfaction
- More work/life conflicts
- Reports of isolation, alienation, exclusion

NATIONAL SCIENCE FOUNDATION

ADVANCE Institutional Transformation Program

- Lack of women's full participation at senior levels is a *systemic consequence of academic culture.* [What is needed is the] creation of *positive, sustainable, and permanent change in academic climates.*
- $4.2 million, 5-year programs to promote the careers of women in academic science
- 19 institutions to date, more to come, each with unique programs sharing common goals

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Common Goals	URI Goals
Recruitment	Faculty Fellows Program Supplemental Funding
Career Development	Workshops Incentive Awards Mentor Training
Policy and Practices Review	Family Leave Policy Dual Career Couples Best Recruitment Practices
Climate Change	Department Climate Workshops Faculty Liaison Program
Assessment	Climate Survey/Pro-Change Focus Groups

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Steps to Climate Change

1. Staging assessment *(part of climate survey)*
2. Schedule workshops and follow-ups, using *Transtheoretical Model* strategies
3. Distill to 4-5 common themes
4. Summit meeting with Administration

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Transtheoretical Model

Organizational and individual behavior change occurs in stages over time

Stages of Readiness

- Precontemplation (no plan)
- Contemplation (might consider possibility)
- Preparation (ready to take initial steps)
- Action (overtly engaging in behavior change)
- Maintenance (sustained change over time)

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Principles of the TTM

- Decisional Balance
  - Change more likely when the perceived advantages of change outweigh perceived disadvantages (pros vs. cons)
- Self-Efficacy
  - Change more likely when there is greater perceived ability to engage in specific behavior successfully
- Processes of Change
  - Movement through stages facilitated by 10 cognitive and behavioral strategies

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4 Key Behaviors

- Creating Opportunities for Collaboration
  - Introducing new women faculty to other faculty on and off campus
  - Inviting women faculty to collaborate on projects
  - Facilitating students to work with women faculty
- Enhancing Competency through Mentoring
  - Teaching about funding mechanisms
  - Explaining the communication channels and network structure of university offices
  - Offering guidance on how to publish

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4 Key Behaviors

- Providing Resources for Doing Research
  - Sharing data sets
  - Sharing equipment facilities
  - Writing women faculty in on grant proposals
- Generating Support through Community
  - Including women faculty in social activities
  - Encouraging social activities for the department
  - Being available to offer help and advice to new women faculty

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How Ready are URI Faculty to ADVANCE Women Scientists?

- STEM Faculty (N = 138)
- 73.7% Men & 26.3% Women
- Mean Age = 51.31
- Are you taking these 4 steps to advance women scientists at URI?
  - NO, and I don't intend to in the next 6 months
  - NO, but I intend to in the next 6 months
  - NO, but I intend to in the next 30 days
  - YES, I have been, but for less than 6 months
  - YES, I have been for more than 6 months

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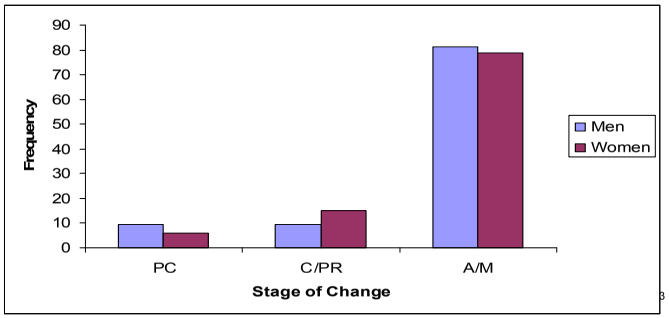
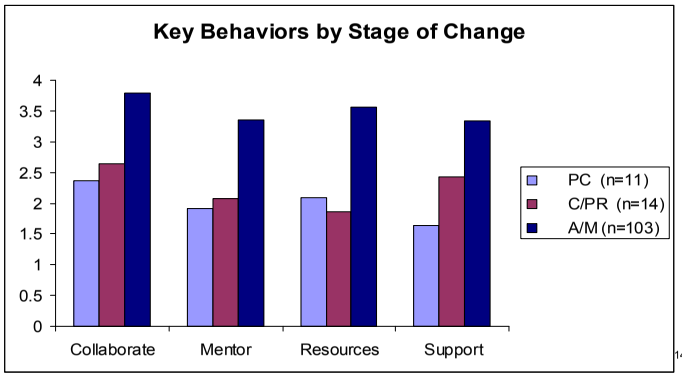
Stage of Change

- 8.5 % PC (no plan)
- 10.8% C/PR (considering possibility/ready to begin)
- 80.8% A/M (taking action)



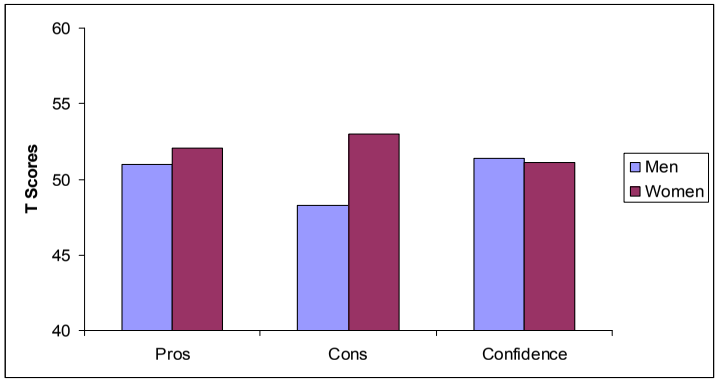
4 Key Behaviors by Stage

- Faculty in later stages of readiness more likely to do the behaviors



TTM Constructs

- Men rated fewer cons of advancing women scientists than women



Departmental Climate Workshops

- *Appreciative Inquiry* Workshop Format:
  "The process of studying a phenomenon changes it; organizations grow in direction they ask questions about and focus attention on"
- Applying strategies in TTM:
  Movement through stages facilitated by 10 processes of change
  - *Consciousness raising*
  - *Dramatic relief*
  - *Environmental and self reevaluation*
  - *Social and self liberation*
  - *Reinforcement management*
  - *Counter-conditioning*
  - *Helping relationships*
  - *Stimulus control*

Feedback

- "The most valuable aspect of this workshop was . . .

  Facing the issues
  - "Bringing up 'real' issues and being able to discuss them openly"
  - "Increased awareness of issues surrounding work environment of junior faculty"
  - "Awareness of some previous problems associated with our work environment"
  - "Should have done this a long time ago"

  Connecting with colleagues
  - "Learning that other faculty in the department share the same concerns"
  - "Initiating what may have been missing: social interaction"
  - "Group decision making and developing action lists"
  - "Chance to talk to colleagues about key values and unusual topics"

- Average evaluation: 8.6 out of 10

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Key Ingredients for Success

- Endorsement from the top
- Focus on benefits to everyone
- Avoid blaming
- Include at least 3-5 women in workshops
- Follow-up quickly with feedback
- Identify responsible parties for action steps
- Make part of larger picture
- Collaborate with other campus groups

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