A Measure of Culture Conducive to Women’s Academic Success (CCWAS)

Variation across departments and divisions at one academic institution

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A cluster-randomized trial of an intervention to enhance the institutional culture, increase academic productivity, and improve job satisfaction for women faculty.

Overall goal to create an environment where women can succeed fully in their careers, maximizing their contributions to academic medicine and improving workplace for all faculty.

Cluster-randomized intervention trial
• 27 departments/divisions randomized: 13 to intervention, 14 to control
• 134 women faculty consented: 62 in intervention, 72 in control

Major Accomplishments to Date
• Culture measure developed (Academic Medicine, Nov 2012)
• Women assistant professors completed:
  - Manuscript Writing Group
  - Total Leadership Program
  - Additional workshops
• 13 Task Forces are implementing department/division-specific initiatives
• Department Chairs & Division Chiefs provided oversight and input into task force initiatives

Specific aims

Culture is thought to be a key factor that contributes to success in academic medicine. The unique culture of a department or division may be particularly important to faculty success.

The purpose of this study is to explore predictors and outcomes of a culture contributive to women’s academic success.

Hypothesized relationships

Association between CCWAS scores and outcome measures
• Women in more positive cultures reported greater satisfaction and commitment to depts/divisions
• Women in more positive depts/divisions cultures reported lower levels of work-family conflict (for three of the four types of work-family conflict)

Table 1. Associations with Outcome Measures

<table>
<thead>
<tr>
<th>Measure</th>
<th>% Women in division</th>
<th>N</th>
<th>Mean</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction</td>
<td>0.35</td>
<td>27</td>
<td>3.25</td>
<td>0.10</td>
</tr>
<tr>
<td>Agreement</td>
<td>0.73</td>
<td>27</td>
<td>3.16</td>
<td>0.05</td>
</tr>
<tr>
<td>Non family conflict</td>
<td>0.16</td>
<td>27</td>
<td>0.27</td>
<td>0.16</td>
</tr>
<tr>
<td>Total WIF</td>
<td>0.10</td>
<td>27</td>
<td>3.21</td>
<td>0.00</td>
</tr>
<tr>
<td>Total FIW</td>
<td>0.10</td>
<td>27</td>
<td>3.15</td>
<td>0.00</td>
</tr>
<tr>
<td>WIF-Non family conflict</td>
<td>0.19</td>
<td>27</td>
<td>0.08</td>
<td>0.00</td>
</tr>
</tbody>
</table>

• There was notable variation in the average CCWAS scores across depts/divisions
• Women faculty within depts/divisions agree on the extent to which the culture of their depts/divisions is conducive to women’s academic success. There are significant differences in culture across depts/divisions
• Regarding outcomes, women working in more conducive cultures were more satisfied and committed to their depts/divisions and experienced less work-family conflict
• Regarding predictors of CCWAS scores, pediatric divisions had significantly more conducive cultures than non-pediatric depts/divisions, in line with our hypothesis
• Other hypothesized predictors were not significantly related to CCWAS scores
• This tool will be used to test the effectiveness of interventions to improve the culture of academic medicine for women faculty
• Testing of this culture measure (CCWAS) is being planned at other academic health centers to further validate these findings

Measurement development

The CCWAS Instrument: A Measure of “Culture Conducive to Women’s Academic Success”
• A measure of a conducive culture was developed:
  - Shared beliefs regarding the extent to which the depts/divisions enable women faculty to achieve career success
  - Instrument development involved:
    - Review of literature and existing questionnaires
    - Focus groups with junior faculty at another institution
    - In-depth discussions with experts in field
  - Pilot test with 16 junior women faculty at over 10 academic health centers
• Final version: 46 items measuring CCWAS comprising four related, but distinct dimensions:

1. Associations
2. Agreement
3. Non family conflict
4. Total WIF

Results

Association of department level predictors and CCWAS scores
• Based on a priori hypotheses, we explored the relationship between the CCWAS measure and:

Table 2. Associations with Predictor Measures

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Multiple R</th>
<th>R-squared</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department level</td>
<td>0.25</td>
<td>0.06</td>
<td>0.00</td>
</tr>
<tr>
<td>Female Chair/Chief</td>
<td>0.20</td>
<td>0.04</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Summary

• Women faculty within depts/divisions agree on the extent to which the culture of their depts/divisions is conducive to women’s academic success. There are significant differences in culture across depts/divisions
• Regarding outcomes, women working in more conducive cultures were more satisfied and committed to their depts/divisions and experienced less work-family conflict
• Regarding predictors of CCWAS scores, pediatric divisions had significantly more conducive cultures than non-pediatric depts/divisions, in line with our hypothesis
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Overall satisfaction for women faculty.