SOURCE Basics and Example of use as a Reporting and Feedback Intervention tool

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Disclaimers

- The views expressed here are my own and do not necessarily reflect the position or policy of the University of Minnesota, HealthPartners Institute, the Department of Veterans Affairs or the United States government.
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Learning Objectives

- After this presentation, you should be able to...
- Identify multiple dimensions of local research integrity climates as assessed by the Survey of Organizational Research Climates (SOURCE)
- Differentiate use of SOURCE as a QI tool from its use as a research tool
- Describe results of a pilot test using SOURCE reporting as a QI intervention in the research service of the U.S. Department of Veterans Affairs
What is the Survey of Organizational Research Climates (SOURCE)?
Some Specifics about SOURCE

- Survey contains 28 items (5 point Likert scales) plus classification information about respondents.
- Responses are confidential
- Takes 10–15 minutes to complete online.
- Is the only validated instrument specifically designed to measure the climates of research integrity in academic research organizations.
- SOURCE scales correlate with self-reported behavior in the conduct of research
SOuRCE, seven climate domain scales

1) Reasonableness of departmental expectations for research productivity
   ◦ E.g., expectations for investigators to obtain external funding

2) Extent to which research integrity norms exist
   ◦ E.g., the degree to which people value maintaining data integrity and data confidentiality

3) Extent to which activities take place to socialize researchers into these norms
   ◦ E.g., the degree to which supervisors are committed to talk with supervisees about key principles of research integrity

4) Extent to which factors in the local environment may inhibit research integrity
   ◦ E.g., the degree to which there is a lack of adequate human or material resources
5) Quality and availability of resources pertaining to the responsible conduct of research (RCR)
   ◦ E.g., the degree to which respondents think there is adequate accessibility of research policies, procedures and research ethics experts for consultation

6) Quality of regulatory oversight activities by IRBs, IACUCs
   ◦ E.g., the degree to which regulatory committees such as Institutional Review Boards (IRBs) and Institutional Animal Care and Use Committees (IACUCs) treat researchers with respect

7) Quality of supervisor/supervisee relations
   ◦ E.g., the degree to which supervisors treat supervisees with fairness
Is SOURCE a Research Tool or a Quality Improvement Tool?
As implemented on the NCPRE site, SOURCE is a Quality Improvement tool
  ◦ Collecting perceptions of local climates from organizational members themselves
  ◦ Feeding those results back to organizational leaders

As it will be implemented here in the Netherlands shortly, it is primarily a research tool
  ◦ In research, one will almost always want to add additional “outcomes,” or “predictor” measures

As it was implemented in our VA project, it was both
Some results from fielding the SOURCE in VA
A group–randomized trial in VA

- First attempt to formally assess whether employing the SOURCE as a feedback intervention leads to organizational change efforts
  - In essence a pilot study
- Two–arm study – comparing a “basic report” feedback arm to an “enhanced” feedback arm
- Randomly selected 42 VA facilities with sufficiently large research services
Feedback distributed to Associate Chiefs of Staff for Research (ACOS–R) in 41 VA facilities
  ◦ One of random 42 facilities had too few respondents to include

Qualitative, semi-structured interviews with consenting ACOS–R to assess outcomes

Interviews occurred roughly 6 months after distribution of the initial basic SOURCE report in December 2014

Main outcomes results are “in press” at American Journal of Bioethics – Empirical Ethics
Survey Fielding
42 facilities

Facilities randomized (1:1) within 3 "receptivity" strata

Summary Feedback Only

Follow-up Assessment

Summary + Enhanced Feedback

Follow-up Assessment
SOURCE survey in VA

- Fielded in Spring of 2014
- Random sample of 42 VA Facilities with minimum of 20 research-engaged staff
- Anonymous, web-based survey of all research-engaged staff (excluding regulatory only staff)
- Roughly 10,000 invited
- Usable responses received from just over 5,000
- Participation rate of 50%
Notable Variability by Research Area

Within-Facility Variability in Integrity Socialization Scale – by Research Area

(Martinson, Nelson, Hagel-Campbell et al, 2016, Initial Results from the Survey of Organizational Research Climates (SOuRCe) in the U.S. Department of Veterans Affairs Healthcare System, PLOS/One)
A note about organizational sub-units

- Organizations wanting to use the SOURCE have varying numbers and type of “departments” or “research fields”
- What these are need to be specified prior to fielding the SOURCE
- To provide comparative data we have constructed a taxonomy allowing mapping of most existing fields into one comparative category
  - Fields of study covered range from the arts and humanities through engineering, medicine, and the physical sciences.
Hypotheses

- **H1**: Research leaders randomized to the enhanced intervention group would be more likely to plan or attempt to make organizational changes than research leaders randomized to the basic feedback group.

- **H2**: Research leaders randomized to the enhanced intervention group would be more likely than research leaders randomized to the basic feedback group to plan or attempt to make organizational changes responsive to the results of the survey.
Less than Ideal Participation of Research Leaders

- Research leaders from 25 of 42 (59%) VA facilities consented to participate in the study intervention and follow-up
  - N=14 from enhanced arm
  - N=11 from basic arm
  - Follow-up interviews with 21 of the 25 leaders (88%), 12 from enhanced arm facilities
Proportion taking any action in response to feedback, by study arm

<table>
<thead>
<tr>
<th>Study Group</th>
<th>No Action Taken, n (row %)</th>
<th>Action Taken, n (row %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic</td>
<td>6 (66.7)</td>
<td>3 (33.3)</td>
</tr>
<tr>
<td>Enhanced</td>
<td>4 (33.3)</td>
<td>8 (66.7)</td>
</tr>
</tbody>
</table>

(NS, p = .20)
Are actions taken responsive?

Proportion taking responsive actions, by study arm

<table>
<thead>
<tr>
<th>Study Group</th>
<th>Action Not Responsive, n (row %)</th>
<th>Action Responsive, n (row %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic</td>
<td>7 (77.8)</td>
<td>2 (22.2)</td>
</tr>
<tr>
<td>Enhanced</td>
<td>7 (58.3)</td>
<td>5 (41.7)</td>
</tr>
</tbody>
</table>

(NS, p = .64)
Summary of VA study

- Fielding SOuRCe in VA resulted in
  - Similar scale means and standard deviations as in more traditional academic settings
  - Most notable variability in scale means observed across research areas (rough analogue to departments in university setting)
- Enhanced feedback of SOuRCe results appears to be a promising intervention
  - may increase the likelihood that leaders take responsive action to improve their climates
- A strictly voluntary approach to this reporting and feedback process may result in sub-optimal participation by some leaders
Thank you!

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Parking Lot below here
What is organizational climate?
What is organizational climate?

“the shared meaning organizational members attach to the events, policies, practices, and procedures they experience and the behaviors they see being rewarded, supported, and expected.” (p. 115)

(Ehrhart, Schneider & Macey, 2014)
Survey of Organizational Research Climates (SOURCE)

- A self-assessment tool to gauge organizational member perceptions of the current state of an organization’s research climate.
- SOURCE provides research leaders with:
  - Baseline assessments of their research integrity climates
  - Comparative data to assess aspects of climates which should be mutable and subject to change in response to organizational initiatives aimed at promoting research integrity