

# Survey of Views on Including Grey Literature In Systematic Reviews

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# Investigators

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# Background

## Grey Literature

### Dictionary of Epidemiology

“Reports which are unpublished, have limited distribution or are not included in bibliographic retrieval systems”<sup>1</sup>

### Luxembourg Convention

“Reports which are produced by all levels of government, academics, business and industry in print and electronic formats but which are not controlled by commercial publishers”<sup>2</sup>

<sup>1</sup>Last JM. A Dictionary of Epidemiology. 4th Ed. New York (NY): Oxford University Press; 2001. p78

<sup>2</sup>GL '97 Conference Proceedings. 3rd International Conference on Grey Literature. Luxembourg, 13-14 November 1997.



# Background

## ▪ Advantages

- Comprehensiveness - many clinical trials are not published
- Minimize potential for bias<sup>3</sup>
  - Published trials more likely to have positive results (i.e., publication bias)

## ▪ Disadvantages

- Resource implications
- Incomplete
- Not peer reviewed

<sup>3</sup>Hopewell S, McDonald S, Clarke M, Egger M. Grey Literature in meta-analyses of randomized controlled trials of health care. *The Cochrane Database of Methodology Reviews, Issue 2 2006*; John Wiley & Sons Ltd.



# Background

## Cook et al. (1993)<sup>4</sup>

- Surveyed meta-analysts, methodologists and editors
- Determined their views on the inclusion of unpublished data in meta-analyses
- Observed many differences between editors and meta-analysts/methodologists
  - Editors less inclusive of unpublished data in meta-analyses

<sup>4</sup>Cook DJ, Guyatt GH, Ryan G, Clifton J, Buckingham L, Willan A, McIlroy W, Oxman AD. *JAMA* 1993; 269: 2749-53



# Objectives

Survey systematic reviewers, methodologists and editors and determine how they:

- 1) define grey literature,
- 2) perceive the quality of grey literature, and
- 3) view grey literature in the context of systematic reviews.



# Methods

## Survey Design

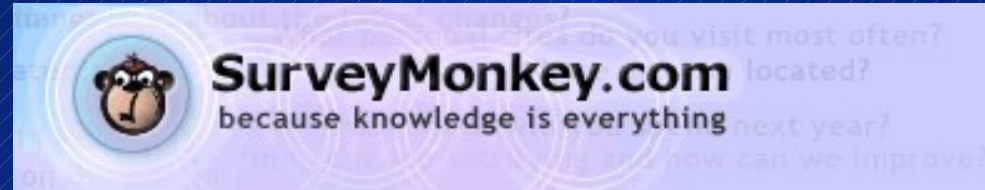
- Five sections
  - 1) Defining grey literature
  - 2) Eligibility in systematic reviews
  - 3) Quality of grey literature
  - 4) Experience and practices
  - 5) Publication issues
  
- 23 Questions
- Response time: 5-10 minutes



# Methods

## Survey Design

- Internet-based



- Pilot testing: convenience sample of systematic reviewers, methodologists, editors (n=11)
- Ethics: Children's Hospital of Eastern Ontario





# Methods

## Sampling process – Systematic Reviewers

- Medline 1966-2005 February Week 2 (Ovid)
- Montori<sup>5</sup> search strategy (modified)
- Limits: indexed Nov. 2004 (included Cochrane reviews), English
- Screening: 1) Author's objective to review evidence  
2) Article described methods



Corresponding  
author

## Methodologists

- Cochrane Methodology Register (Issue 1, 2005) for 100 most recently added records using terms *systematic review\** or *meta\** or *pool\** or *search strategy\**

## Editors

- Editors of journals publishing the systematic reviews or methodology articles



# Methods

## Survey Administration

- Modified Dillman Method<sup>6</sup>
  - Multiple contact
    - Introductory e-mail informing of upcoming survey
    - Up to 3 e-mail with cover letter and survey link
    - Cover letter and paper copy of survey by facsimile (8 weeks)
- Participation was voluntary – implied consent
- Collected from September 2005 to January 2006

<sup>6</sup>Dillman 2000. *Mail and Internet Surveys: The Tailored Design Method*. New York: John Wiley and Sons Ltd.



# Results

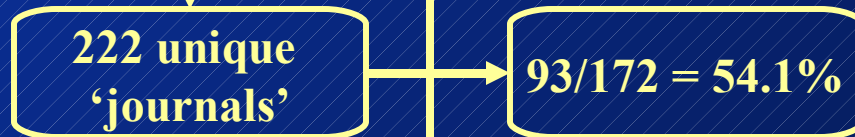
## *Systematic Reviewers*



## *Methodologists*



## *Editors*



Total =  
315/535  
59%



# Results

- 1) Defining grey literature
- 2) Eligibility in systematic reviews
- 3) Quality of grey literature
- 4) Experience and practices
- 5) Publication issues



# Results

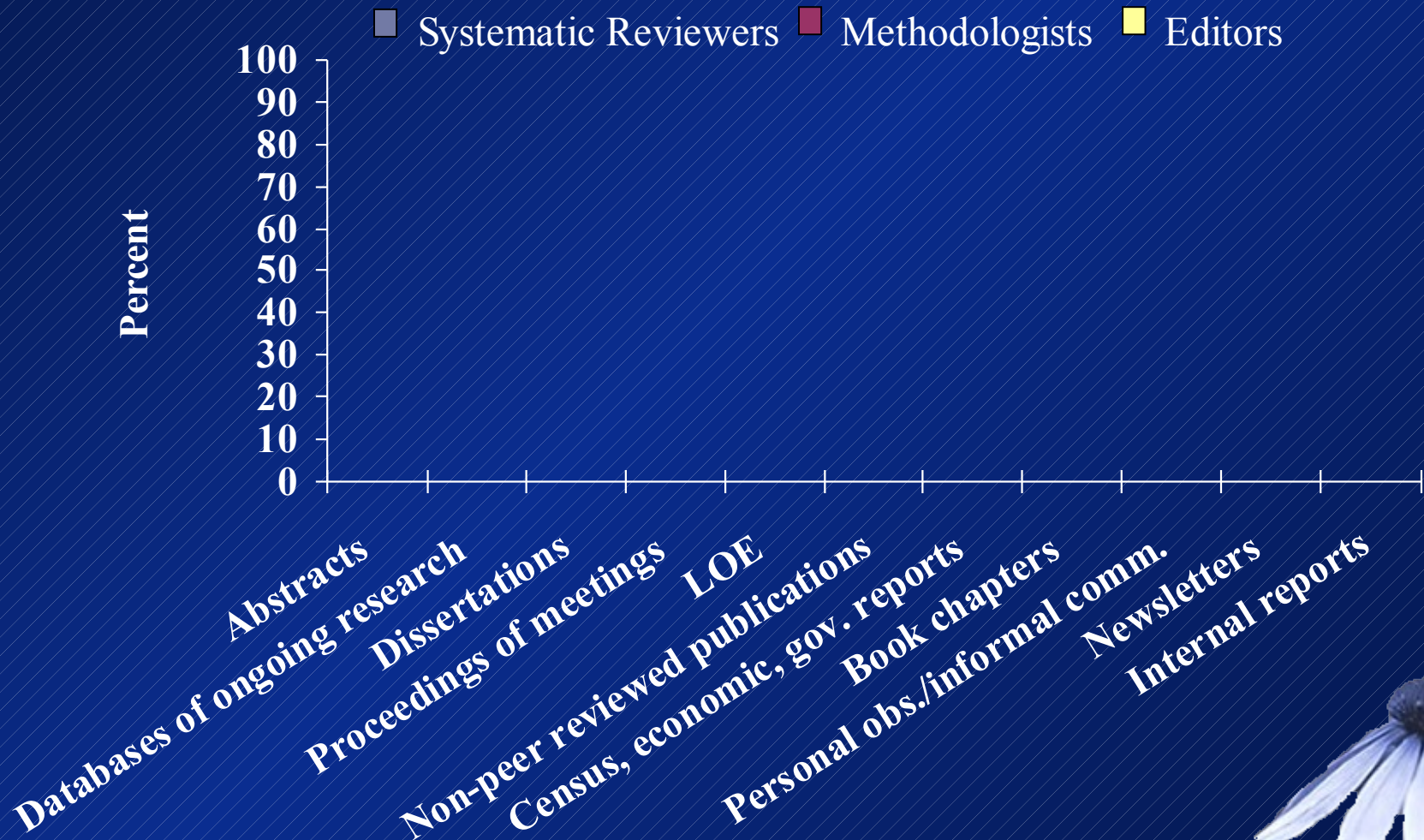
	Overall	SR	M	E
Familiar with term 'grey literature', %	70.5	76.0	73.1	57.1

SR, Systematic Reviewers; M, Methodologists; E, Editors



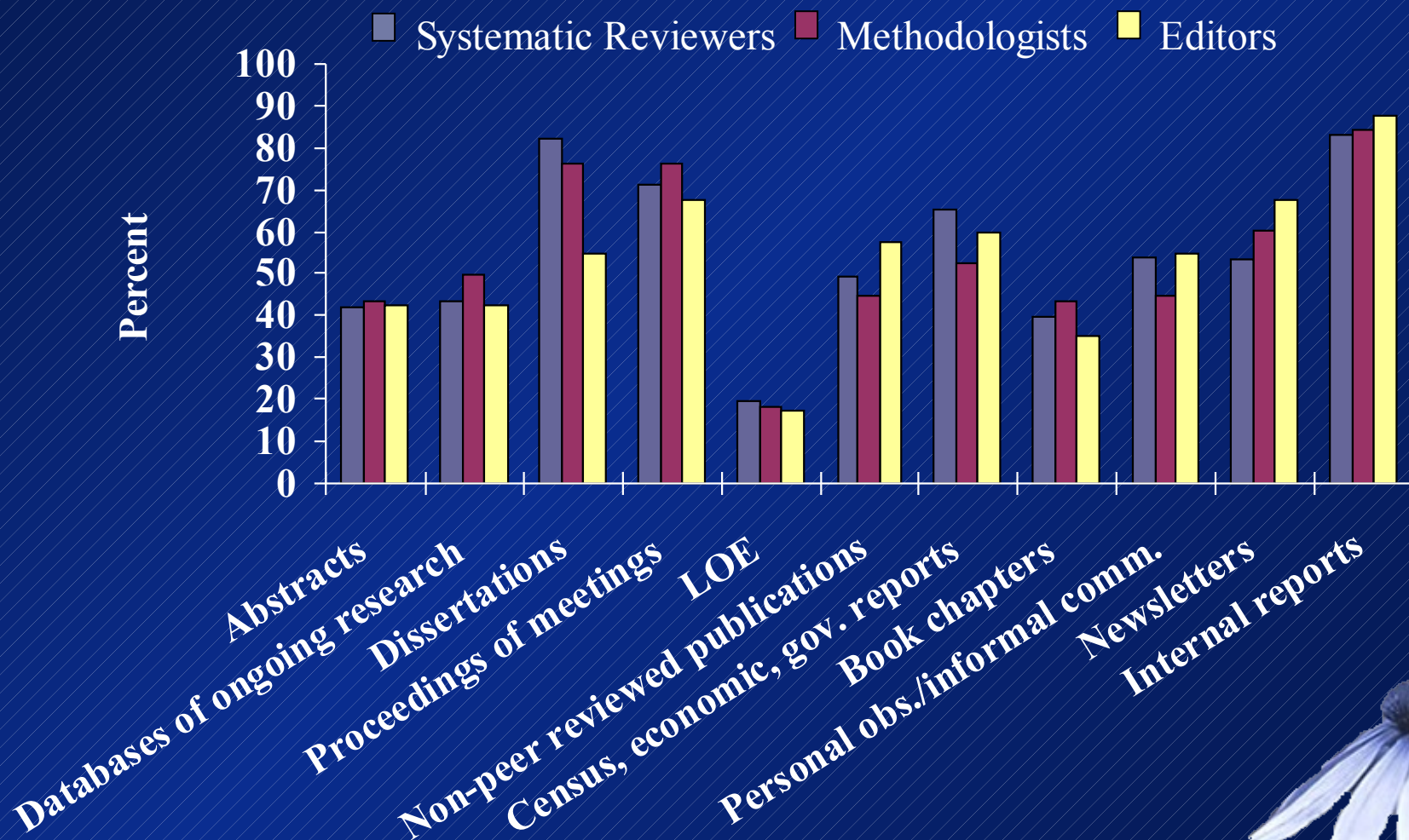
# Results

Would you classify the following reports as grey literature?



# Results

Would you classify the following reports as grey literature?



# Results

- 1) Defining grey literature
- 2) Eligibility in systematic reviews
- 3) Quality of grey literature
- 4) Experience and practices
- 5) Publication issues





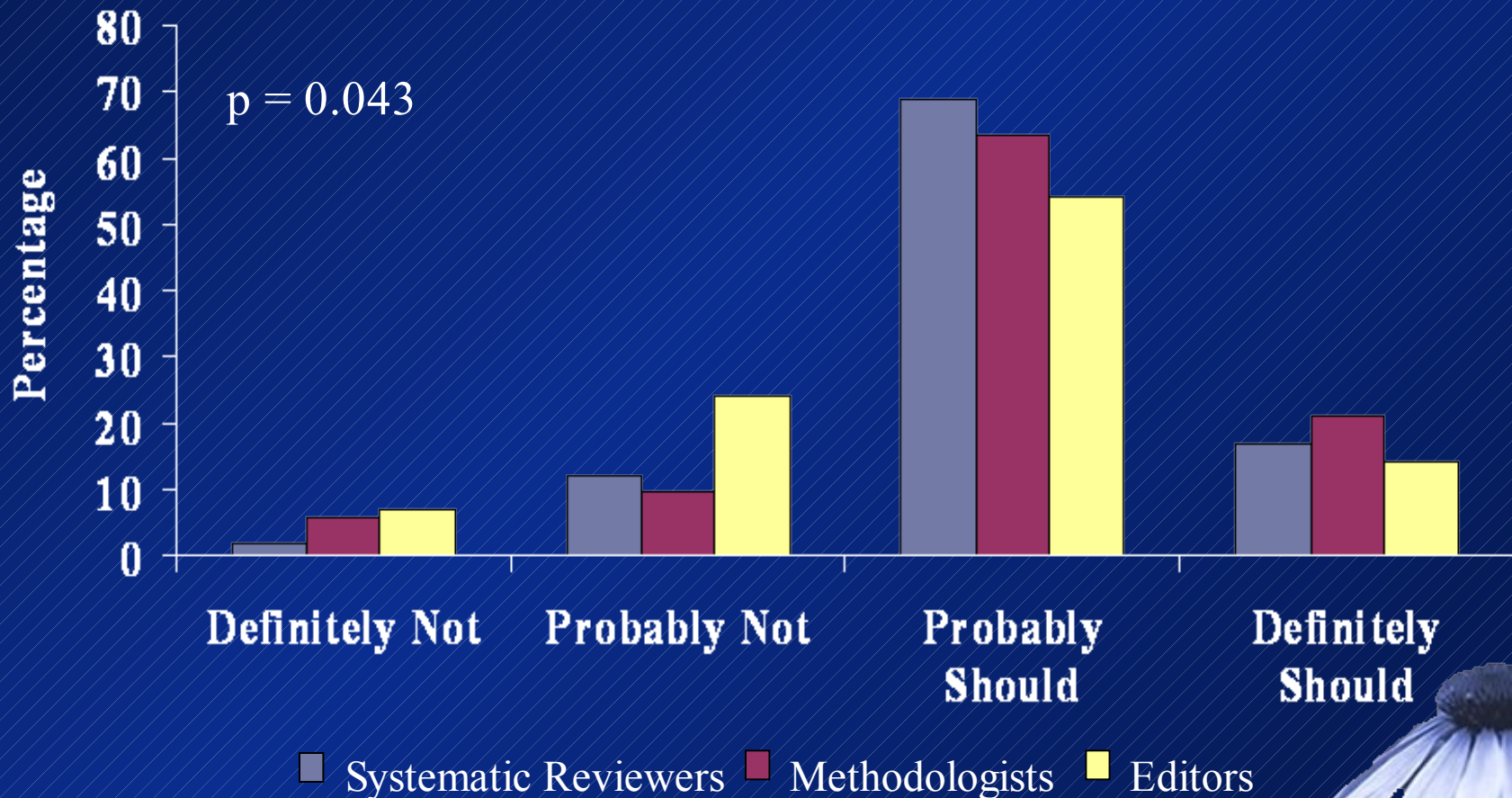
# Results

Do you believe reports of grey literature should be eligible for inclusion in systematic reviews?



# Results

Do you believe reports of grey literature should be eligible for inclusion in systematic reviews?



# Results

- 1) Defining grey literature
- 2) Eligibility in systematic reviews
- 3) Quality of grey literature
- 4) Experience and practices
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# Results

- 1) Defining grey literature
- 2) Eligibility in systematic reviews
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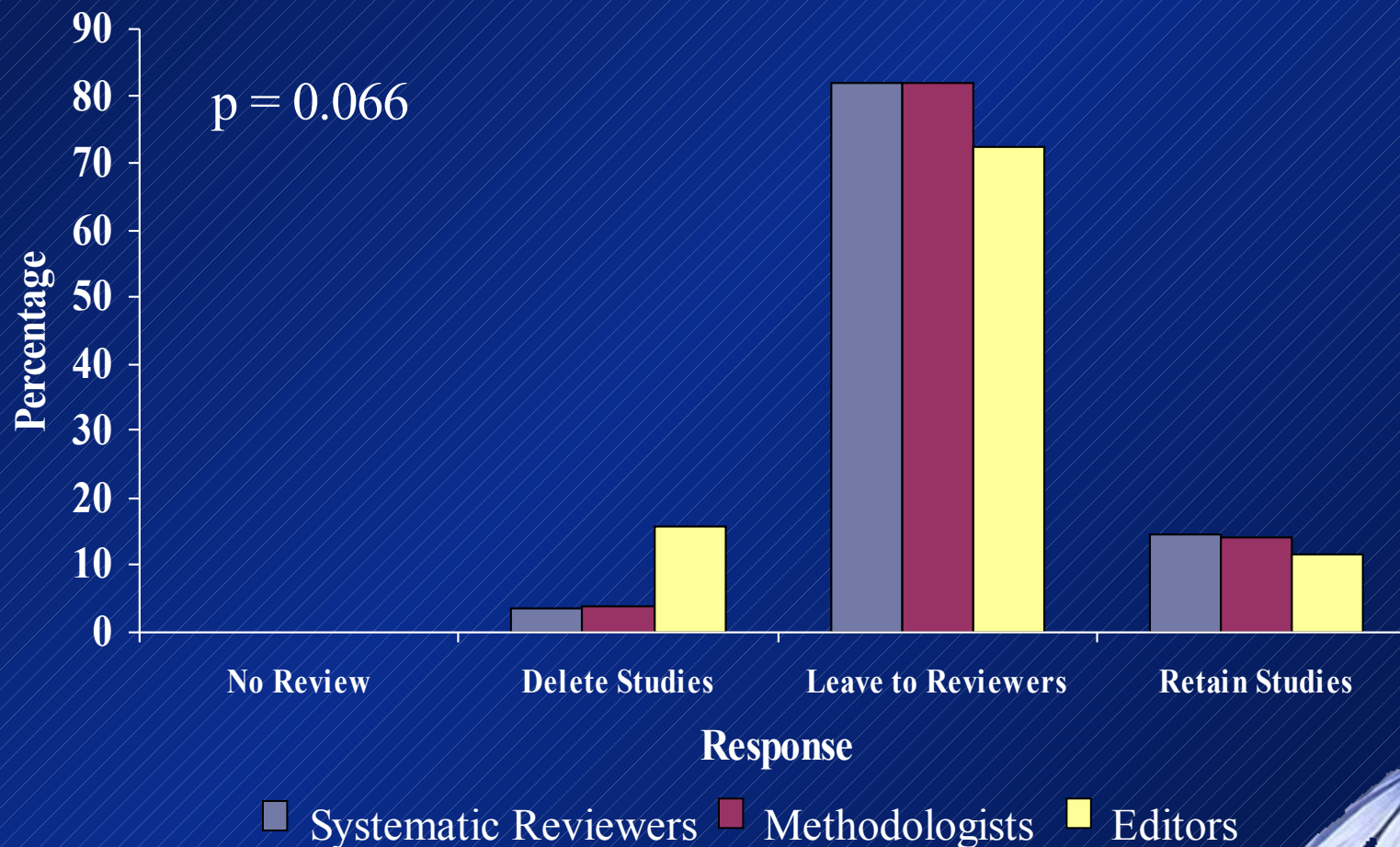
# Results

Editorial practice:  
Report of systematic review containing grey literature



# Results

## Editorial practice: Report of systematic review containing grey literature



# Results

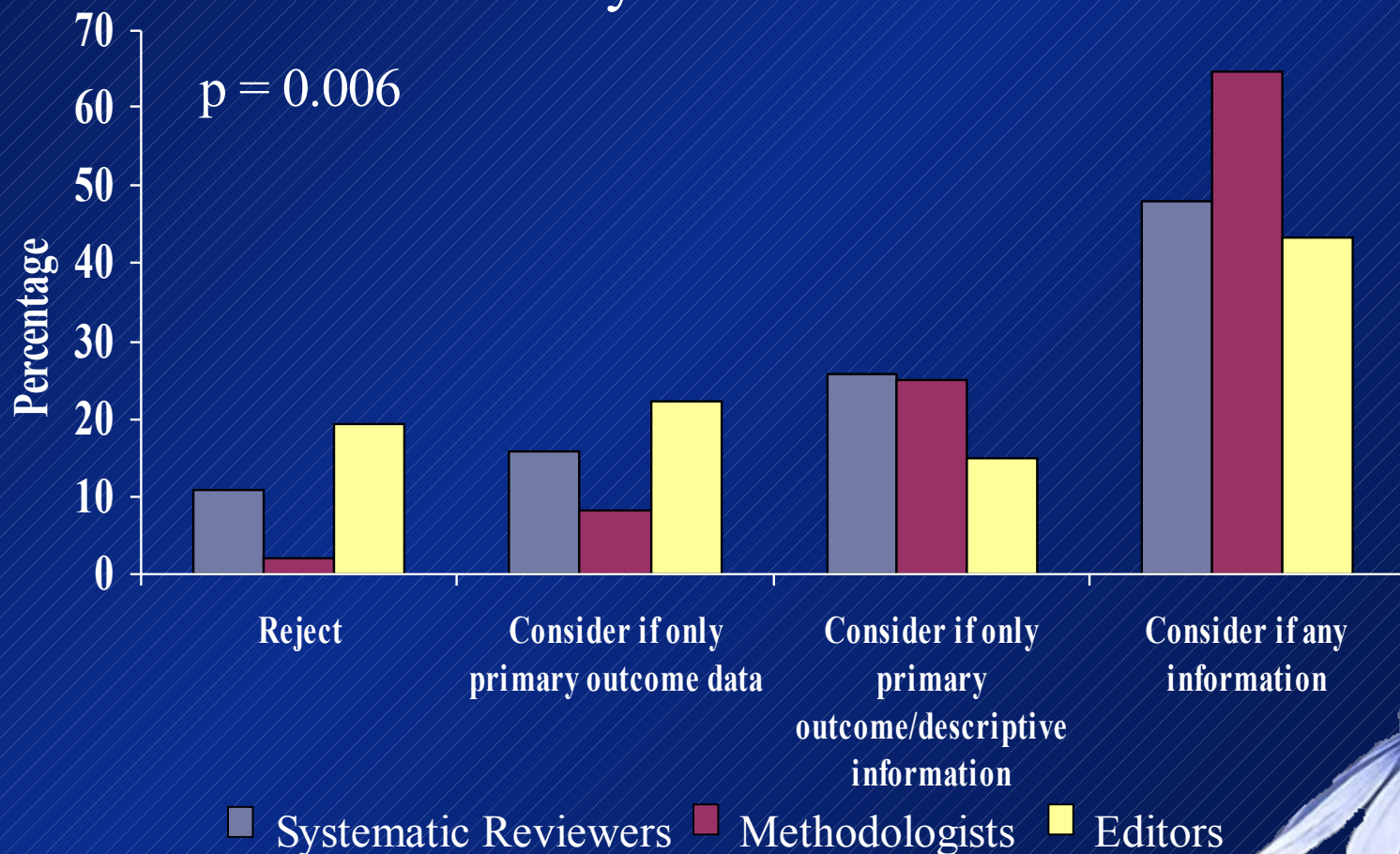
Editorial Practice:

Report of study (e.g. RCT) containing data previously published  
in a systematic review



# Results

Editorial Practice:  
Report of study (e.g. RCT) containing data previously published  
in a systematic review





# Compared to Cook *et al.* (1993)

- Four *similar* questions
- Replication of all response patterns
- Differences still present between editors vs. systematic reviewers (or meta-analysts) and methodologists



# Limitations

- Response rate
  - 60% expected for internet-based surveys
  - Assessment of non-response bias
    - Inclusion/exclusion of unpublished information
    - Inclusion of grey literature (no LOE)
- Sampling strategy
  - Definition of systematic reviews
  - High percentage of Cochrane reviews
    - Minimal differences
      - Cochrane reviewers had more review experience
      - Cochrane reviewers more likely to report ‘always’ searching for grey literature



# Recommendations

- Education about grey literature
  - Increase awareness
  - Evidence suggests ~50% reviews contain grey literature
    - Reviews may be susceptible to bias
- Advocate the use of sensitivity analyses
  - Respondents clearly perceive grey literature as lower 'quality'
- Systematic review teams should always include an experienced reviewer familiar with grey literature



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## Original survey

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# Thank you

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