

Despite high education, U.S. parents and undergraduate students struggle to critically appraise treatment claims.

The Problem

Critically appraising treatment claims using EBP principles prevents against waste and harm in healthcare. However, we do not know to what extent U.S. parents and undergraduate students engage in critical appraisal of treatment claims.

Methods

| Participants: 142 parents → Recruited online via MTurk | |
|---|---|
| Gender | • 55% Male 45% Female |
| Age | • M = 36.9, SD = 7.9, Range: 23 – 64 |
| Race/Ethnicity | • 8% Black • 4% Hispanic* • 2% Multiracial • 81% White • 6% Asian/other |
| Children # | • M = 2.02, SD = 1.3, Range: 1-10 |
| Education | • 10% - High School • 19% - Some college, no degree • 15% - Associate's degree • 43% - Bachelor's degree • 12% - Master's degree |
| Income | • 15% - Less than \$29,999 • 30% - \$30,000 to \$49,999 • 30% - \$50,000 to \$79,999 • 10% - \$80,000 to \$99,999 • 15% - More than \$100,000 |

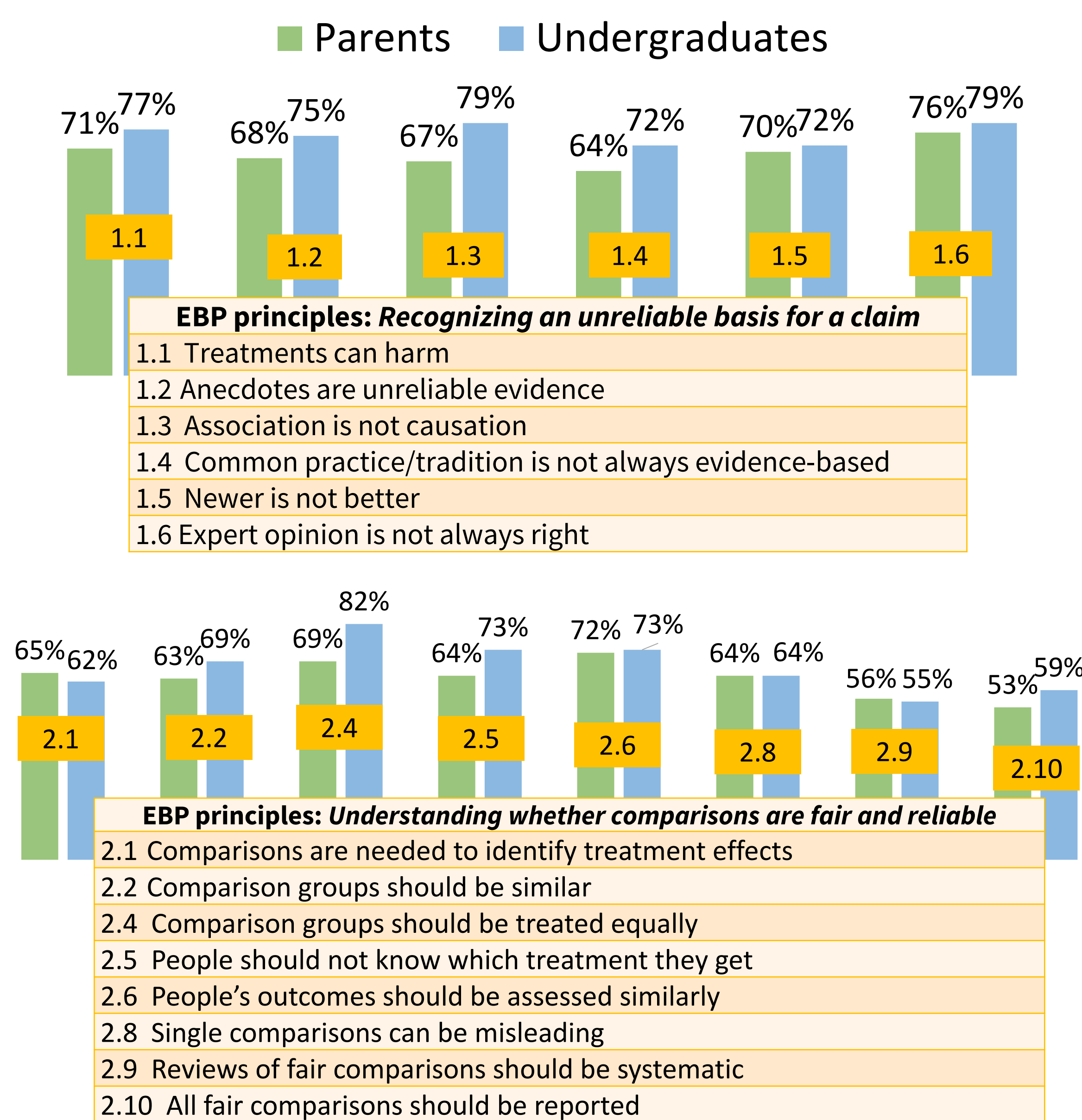
| Participants: 145 undergraduates → Recruited via psychology class | |
|--|---|
| Gender | • 44% Male 56% Female |
| Age | • M = 19.2, SD = 1.2, Range: 18 – 23 |
| Race/Ethnicity | • 8% Black • 25% Hispanic* • 7% Multiracial • 67% White • 16% Asian/other |
| Class Standing | • 63% - Freshman • 23% - Sophomore • 6% - Junior • 8% - Senior |
| Household Income | • 9% - Less than \$29,999 • 7% - \$30,000 to \$49,999 • 12% - \$50,000 to \$79,999 • 10% - \$80,000 to \$99,999 • 62% - More than \$100,000 |

52 single multiple choice critical appraisal questions from Claim Evaluation Tools

Key Results

Critical Appraisal Test Scores

| | Parents | Undergraduates |
|---------|----------------|----------------|
| Average | 63% 33.0/52 | 67% 34.8/52 |
| SD | 11.6 | 7.98 |
| Range | 10-50 | 15-49 |



Bachelor's degree or higher ed = lower critical appraisal scores ($t[140] = -3.5, p < .01$)

CRITICAL APPRAISAL - CLAIM EVALUATION TOOLS⁵

Standardized, psychometrically validated critical appraisal measure

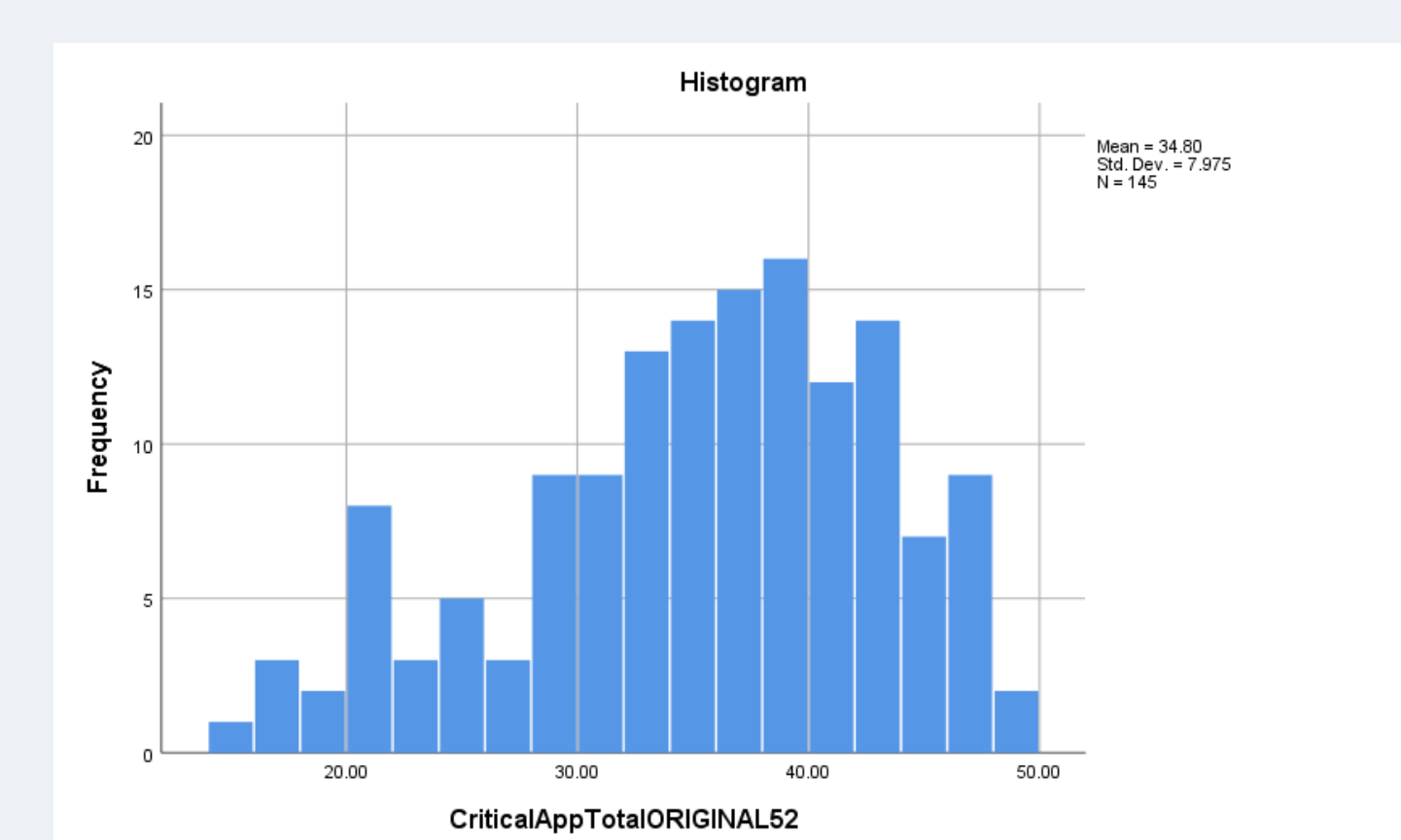
Francis has a serious illness. His friend tells him there is a medicine that helps most people with that illness, and that the medicine is completely safe. How sure can Francis be that the medicine is safe?

- A) Very sure, because treatments that are helpful cannot be harmful
- B) Not very sure, because most medicines can be harmful as well as helpful
- C) It is not possible to say, because the medicine helps most people with Francis' illness
- D) Very sure, because the medicine has helped many people

Doctors studied people with stomach pain before and after they took a new medicine. After taking the new medicine, many people felt less pain.

Question: Can we be sure that the new medicine is good for treating stomach pain?

- A) No, taking the new medicine should have been compared either with not taking the medicine, or with taking an older medicine
- B) Yes, people were asked how much pain they felt before and after they took the new medicine
- C) Yes, the study was done by doctors



| CriticalAppTotalORIGINAL52 | EdBachYN | Mean | N | Std. Deviation |
|----------------------------|----------|---------|-----|----------------|
| Associate's degree or less | | 36.5156 | 64 | 8.71050 |
| Bachelor's degree or more | | 30.1667 | 78 | 12.14460 |
| Total | | 33.0282 | 142 | 11.15776 |

Correlations

| What is your annual household income? (undergraduate) | Pearson Correlation Sig. (2-tailed) | What is your annual household income? | CriticalAppTotalORIGINAL52 |
|---|-------------------------------------|---------------------------------------|----------------------------|
| | | 1 | .096 |
| | | | .256 |
| CriticalAppTotalORIGINAL52 | | 143 | 143 |
| | | | .096 |
| | | | .256 |
| | | 143 | 145 |

Correlations

| CriticalAppTotalORIGINAL52 (parents) | Pearson Correlation Sig. (2-tailed) | CriticalAppTotalORIGINAL52 | What is your annual household income? |
|---------------------------------------|-------------------------------------|----------------------------|---------------------------------------|
| | | 1 | .072 |
| | | | .394 |
| What is your annual household income? | | 142 | 142 |
| | | | .072 |
| | | | .394 |
| | | 142 | 142 |

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Critical appraisal abilities in the United States: an online assessment of parents and undergraduate students

Vanesa Mora Ringle & Amanda Jensen-Doss

Take a picture to get the poster and abstract

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