

# COMPARING SOURCES OF RECRUITMENT INTO INTERNET STUDIES: AMAZON'S MECHANICAL TURK VS. GOOGLE ADWORDS

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## RECRUITMENT INTO ONLINE TRIALS



*Be part of Clinical Research at Yale*

**ARE YOU SUFFERING FROM DEPRESSION?**

Are you suffering from clinical depression? Is your current medication not working? You may be eligible to participate in a study for a unique course of treatment. The study involves a novel drug called Riluzole which largely targets the glutamatergic neurotransmitter system. Riluzole has shown promising signs of relieving depression and anxiety when taken in combination with other prescribed medications. The study will be conducted over an eight-week period with weekly evaluations on an outpatient basis. At the conclusion, you may be eligible to receive a 6-month supply of Riluzole at no cost. In addition, you will receive reimbursement of up to \$500 per visit for travel reimbursements.

*Help us discover*

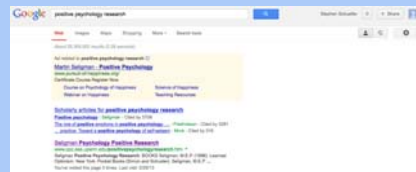
Yale Depression Research Program,  
300 York Street, Suite 11, New Haven  
For additional information, please call  
860.432.8000 or visit [www.yale.edu/clinicalresearch](http://www.yale.edu/clinicalresearch)  
or e-mail [depression@yale.edu](mailto:depression@yale.edu)



# HAPPINESS VALUES AROUND THE WORLD

- Study examining the relationship between the value one places on happiness and well-being from a global population
- Recruit a diverse sample through different methods of recruitment
  - Amazon's Mechanical Turk (MTurk)
  - Google Adwords (GoogleAds)

Task Name	MTurk Request Date	Task Status	Request Count	Task Price
Positive Psychology	May 15, 2013 (3 days 7 hours)	Completed	40/40	\$0.05
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# RECRUITMENT TIME

- **MTurk**
  - Wave 1 (all countries):  $n = 100$ , 9.65 hours or 1 response every 5.79 minutes
  - Wave 2 (excluding India):  $n = 100$ , 3.42 days or 1 response every 49.36 minutes
- **GoogleAds**
  - $n = 68$ , 87 days or 1 response every 6.63 days, 273,942 impressions, 1,230 clicks
  - If the MTurk studies were allowed to run as long as GoogleAds would collect:
    - $n = 112,288$  (at Wave 1 rate)
    - $n = 13,171$  (at Wave 2 rate)

## COST

- **Mturk**
  - \$10.00 (for  $n = 200$ )
  - \$0.05/participant
- **GoogleAds**
  - \$955.03 (for  $n = 68$ )
  - \$14.04/participant
  - If MTurk Studies were provided equivalent resources would collect  $n = 19,100$

## DATA QUALITY

- **Mturk**
  - **Partial Submissions**
    - Wave 1: 43
    - Wave 2: 22
  - **Countries**
    - Wave 1: 15 countries (India,  $n = 75$ )
    - Wave 2: 48 countries (Canada,  $n = 12$ , Pakistan,  $n = 11$ )
  - **Questionnaires**
    - Happiness Values:  $\alpha = .80$
    - Positive Affect:  $\alpha = .92$
    - Negative Affect:  $\alpha = .95$
    - Depression:  $\alpha = .92$
- **GoogleAds**
  - **Partial Submissions: 364**
  - **Countries 33 countries (India,  $n = 23$ , UK,  $n = 7$ )**
  - **Questionnaires**
    - Happiness Values:  $\alpha = .83$
    - Positive Affect:  $\alpha = .94$
    - Negative Affect:  $\alpha = .92$
    - Depression:  $\alpha = .92$

## RAPID DEVELOPMENT AND ITERATION MTURK THOUGHTS

**THOUGHT RECORD**

*Directions:* When you notice your mood getting worse, ask yourself, "What's going through my mind right now?" and as soon as possible jot down the thought or mental image in the Automatic Thoughts column. Then consider how realistic those thoughts are.

Date	Situation Where were you - and what was going on - when you got upset?	Emotions What emotions did you feel (sad, anxious, angry, etc.)? Rate intensity 0-100%.	Automatic Thoughts What thoughts and/or images went through your mind? Rate your belief in each (0-100%).	Alternative Responses Use the questions at the bottom to compose responses. Rate your belief in each (0-100%). Also, consult the list of possible distortions.	Outcome Rate your belief in your automatic thoughts (0-100%) and in the intensity of your emotions (0-100%).

(5) What is the evidence that the automatic thought is true? What is the evidence that it is not true?  
 (6) Are there alternative explanations for that event, or alternative ways to view the situation?  
 (7) What are the implications if the thought is true? What's most upsetting about it? What's most realistic? What can I do about it?  
 (8) What would I tell a good friend in the same situation?  
 Possible Distortions: All-or-none Thinking; Overgeneralizing; Discounting the Positives; Jumping to Conclusions; Mind-reading; Fortune-telling; Magnifying/Minimizing; Emotional Reasoning; Making "Should" Statements; Labelling; Inappropriate Blaming

## MODIFICATIONS AND THOUGHTS

- Wave 1: Emotion/Situation/Thought/Alternative/Evidence
  - Wave 2: Emotion/Situation/Core Belief/Thought/Alternative
  - Wave 3: Emotion/Situation/Thought/Distortion/Alternative
  - Wave 4: Emotion/Situation/Thought/Belief (0-100%)/Alternative
- 
- Wave 1: "Oh boy, Dan is going to get mad at me for this one!"/ "I know if I'm polite, he won't write me a ticket."/He didn't give me a ticket
  - Wave 2:"This is going to ruin my life"/Helpless/"It's going to be ok"
  - Wave 3: "They are not returning my phone call because they don't want to help me"/Making Guesses/"They are just busy"
  - Wave 4: "She must think I am a horrible mother"/100%/"I feel like I have tried to make him understand his behavior affects other and will have to keep working with him on this"

## SUMMARY

- Recruitment methods should match trial
  - Reflect goals of scalability, adaptability
- MTurk offers a low-cost, easily accessible population
  - Know the population
- Quality of data does not differ strongly between MTurk and GoogleAds
- MTurk studies can be useful at different stages in the research process
  - Internal development
  - Early trials

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QUESTIONS?