



# Does Intellectual Humility Predict the Discernment of Mental Health Information Quality?

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## Introduction

- There is a concerning amount of misleading information on the internet, particularly on social media. Many researchers have identified the issue and have called for ways to understand how this information is processed, and how we might attenuate the damage.
- Prior research has shown that **intellectual humility (IH)**—one’s awareness of the limitations of one’s knowledge—is related to better discernment of information quality (Leary et al., 2017). This study investigates the role of IH in discerning weak versus strong **mental health information** in an online context.
- Hypotheses
  - H1:** Compared to those who score lower on indices of IH, those who score higher on indices of IH will more accurately discern between weakly versus strongly framed information supporting the benefits of various strategies aimed at improving mental health in terms of their quality.
  - H2:** Those who score higher on indices of IH will be less inclined to share weakly (vs. strongly) framed information with others compared to those who score lower on indices of IH.

## Methods



- Participants**
- We recruited participants using the Prolific Academic online survey platform.
  - Final sample: N = 149 (M age = 44.95, SD = 1.24); 55 male, 90 female, 4 answered “not mentioned above”.
- Part 1:**
- Independent Variables**
    - General Intellectual Humility Scale (6 statements; e.g., “In the face of conflicting evidence, I am open to changing my opinions.”; Leary et al., 2017)
    - Comprehensive Intellectual Humility Scale (22 statements; Krumrei-Mancuso & Rouse, 2016)
    - Specific Intellectual Humility Scale (using mental health as the topic; 9 statements; Hoyle et al., 2016)
  - Covariates**
    - Trust in Science and Scientists Inventory (21 statements; Nadelson et al., 2014)
    - The Need for Cognition Scale (18 statements; Cacioppo & Petty, 1982)
    - Social desirability (16 statements; Hart et al., 2015)
  - Demographics**
    - Socioeconomic status, Education level, Political affiliation, Sex, Ethnicity, Age
- Part 2:**
- Discernment is measured using an **information evaluation task**. During this task, participants read four infographics proposing strategies to enhance mental health, manipulated by both topic and argument strength.
- Dependent Variables**
- Quality Ratings** (e.g., 1 - Weak, 9 - Strong, 1 - Unconvincing, 9 - Convincing)
  - Intent to Share** (1 - Extremely Unlikely, 9 - Extremely Likely)
  - Satisfaction With Life Scale (5 statements; Diener et al., 1985)
  - GAD-2/PHQ-2 (4 statements; Kroenke et al., 2003, Kroenke et al., 2007)

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### Strong Evidence



### Weak Evidence



Figure 1. Example Infographics

### IH × Information Quality Interaction on Quality Ratings

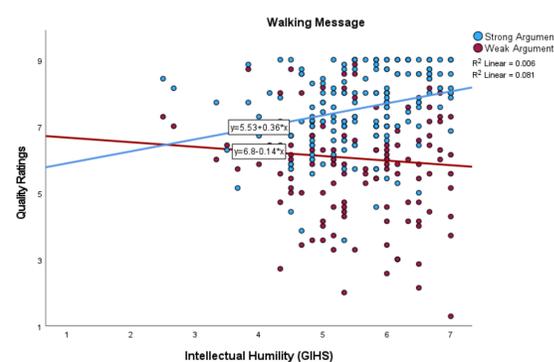
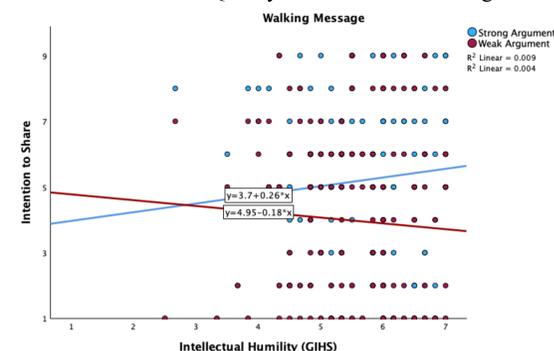


Figure 2. Results from ANCOVA of GIHS and Quality ratings for the infographics with the topic of benefits of daily walking.

### IH × Information Quality Interaction on Sharing Intentions



## Results

- We found a significant two-way interaction between intellectual humility (IH) and information quality in predicting participants’ ratings. In other words, the extent to which participants differentiated between high- and low-quality information depended on their level of IH. Individuals high in IH showed clearer discrimination, giving higher ratings to high-quality information and lower ratings to low-quality information.
- A similar interaction emerged for sharing intentions. The tendency to share high-quality (versus low-quality) information varied as a function of IH, with individuals high in IH being more likely to share high-quality information relative to low-quality information.

## Discussion

### Implications

- We can see that those higher in IH are more likely to rate weakly framed information as weaker and strongly framed information as stronger compared to those lower in IH.
- We see the same pattern with Intent to Share, those higher in IH are less likely to share weak information compared to those lower in IH.
- This shows that those higher in IH are also better at discerning strong and weak evidence in the **context of mental health information online**.
- IH may serve as a protective factor in terms of navigating mental health information in online contexts, allowing individuals to avoid weak, even misleading, advice.
- Importantly, there is high generalizability as the participants represent the U.S population well. We found the same patterns in our pilot study with a sample of college students from FSU.

### Limitations

- Due to the within-subjects design, participants’ ratings may be impacted by comparing to the infographics they already viewed.
- The infographics lack some ecological validity in reference to social media posts, as we do not provide information on the source or profile of the post.
- We chose to manipulate argument quality (e.g. using anecdotal vs. scientific evidence), however on social media, there are also false claims. Future research could use true and false information.

## References

Cacioppo, J. T., & Petty, R. E. (1982). The need for cognition. *Journal of Personality and Social Psychology*, 42(1), 116–131.

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49(1), 71–75.

Hart, C. M., Ritchie, T. D., Hepper, E. G., & Gebauer, J. E. (2015). The balanced inventory of desirable responding short form (BIDR-16). *Sage Open*, 5(4), 2158244015621113.

Hoyle, R. H., Davison, E. K., Diebels, K. J., & Leary, M. R. (2016). Holding specific views with humility: Conceptualization and measurement of specific intellectual humility. *Personality and Individual Differences*, 97, 165–172.

Kroenke, K., Spitzer, R.L. and Williams, J. B. (2003) The Patient Health Questionnaire-2: Validity of a Two-Item Depression Screener. *Medical Care*, 41, 1284-1292.

Kroenke, K., Spitzer, R. L., Williams, J. B., Monahan, P. O., & Löwe, B. (2007). Anxiety disorders in primary care: Prevalence, impairment, comorbidity, and detection. *Annals of Internal Medicine*, 146(5), 317–325.

Krumrei-Mancuso, E. J., & Rouse, S. V. (2016). The development and validation of the comprehensive intellectual humility scale. *Journal of Personality Assessment*, 98(2), 209–221.

Leary, M. R., Diebels, K. J., Davison, E. K., Jongman-Sereno, K. P., Isherwood, J. C., Raimi, K. T., Deffler, S. A., & Hoyle, R. H. (2017). Cognitive and Interpersonal Features of Intellectual Humility. *Personality and Social Psychology Bulletin*, 43(6), 793–813.

Nadelson, L., Jorcyk, C., Yang, D., Jarratt Smith, M., Matson, S., Cornell, K., & Husting, V. (2014). I just don’t trust them: The development and validation of an assessment instrument to measure trust in science and scientists. *School Science and Mathematics*, 114(2), 76–86.