

# Perceptions of Adverse Reactions Among College Students

PRESENTER: S. Jack Shuai



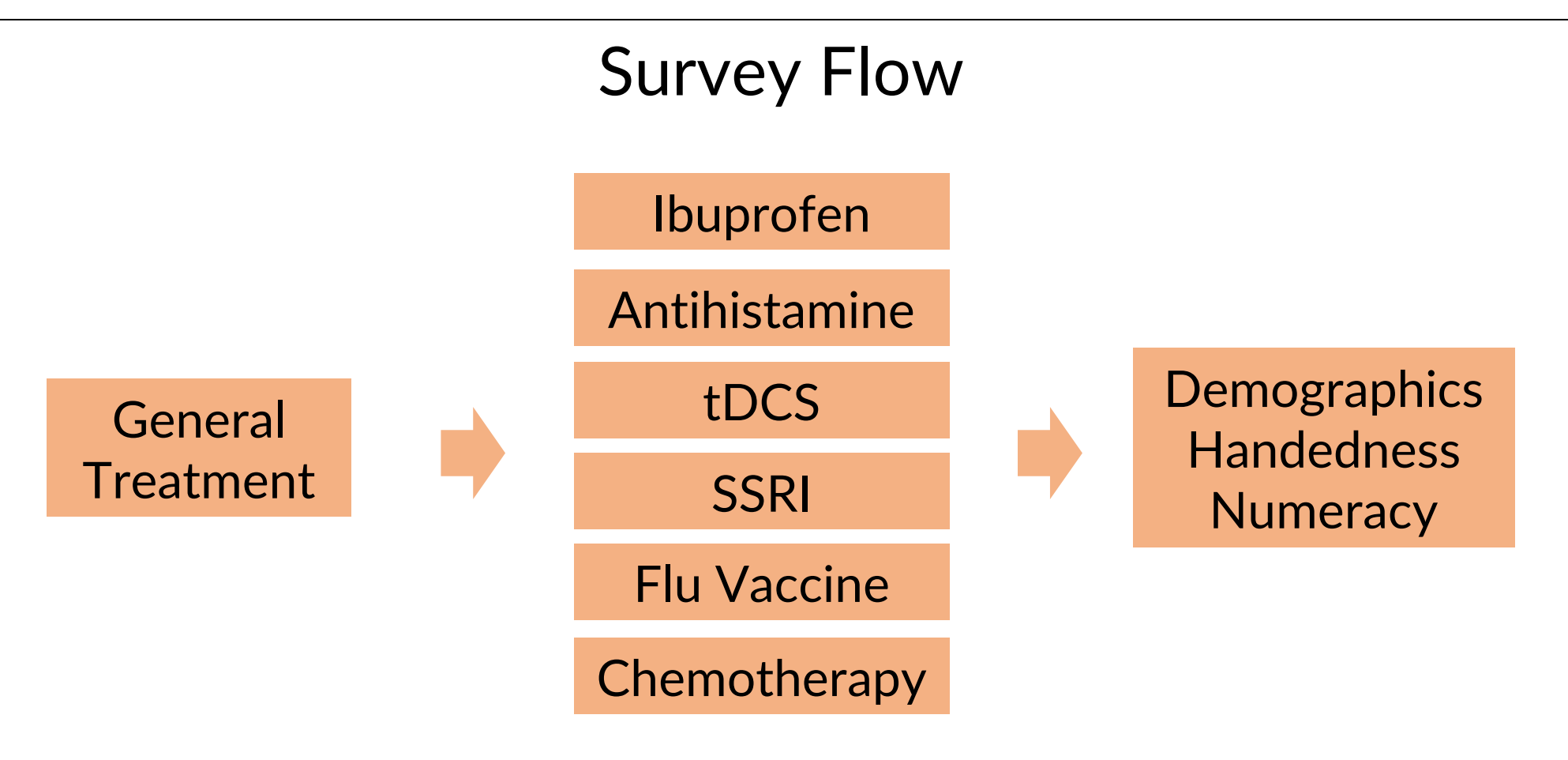
# Perceived risk of side effects varied by treatment. But people may hold a default risk perception of 38% for unspecified or unfamiliar treatments.

## INTRODUCTION

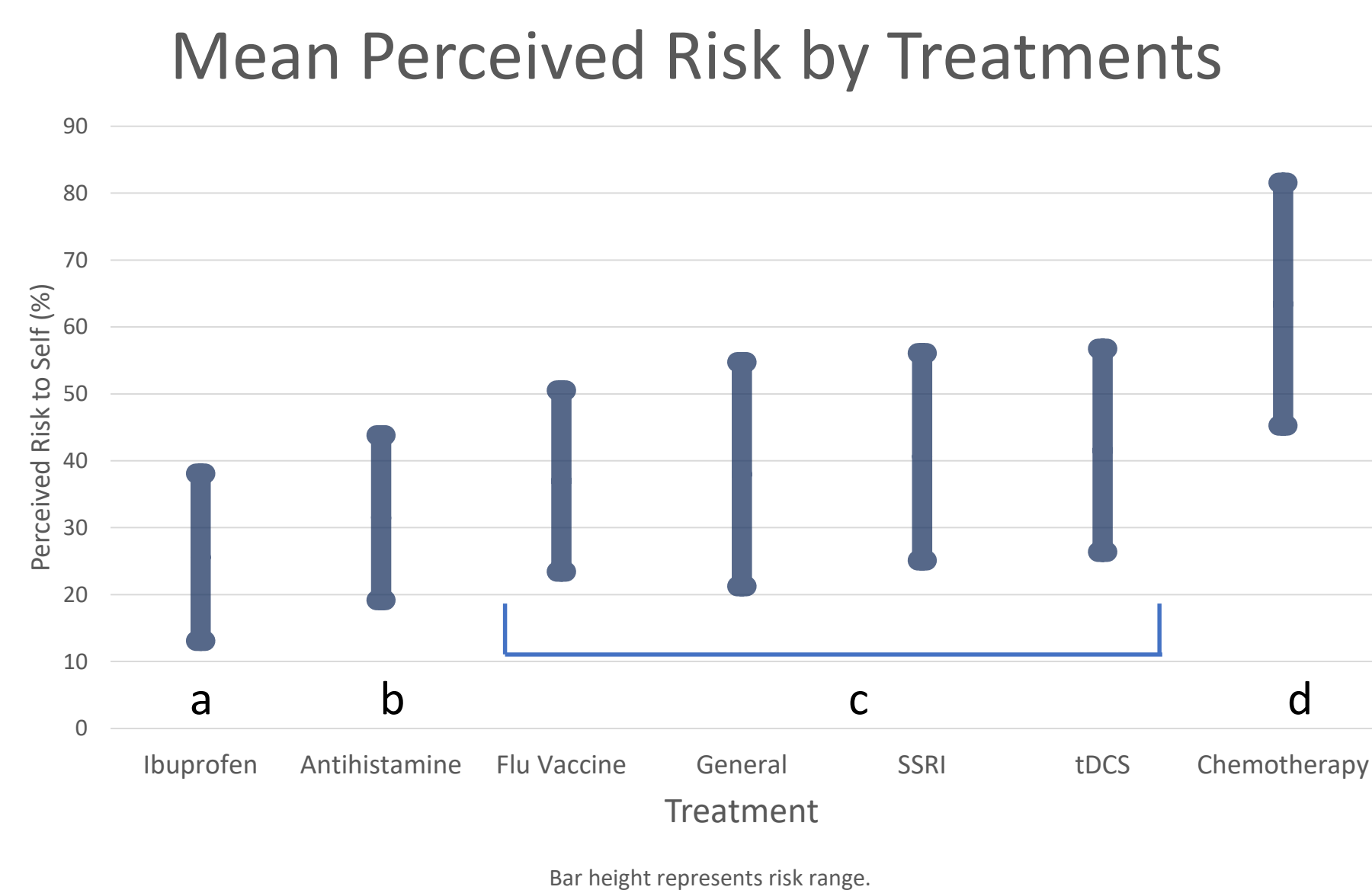
- Expectations of negative effects from medical interventions can be self-fulfilling and produce harmful “nocebo” effects.
- Attribute framing (“30% chance of side effects” Vs “70% chance of no side effects”) can reduce nocebo side effects.
- However, past research showed that numbers too far from expectations can reduce or negate the framing effect (Janiszewski et al., 2003).
- Currently, people’s expectations of side effects, including base-rates of perceived risk, are not well-understood.

## METHODS

- Online survey of 124 intro psych students
- Main DV: “If a doctor recommended a drug or treatment to you but warned that you could experience a negative side effect, what number(s) pop into your head? Specifically, what do you think the likelihood is of you getting a side effect?”



## RESULTS

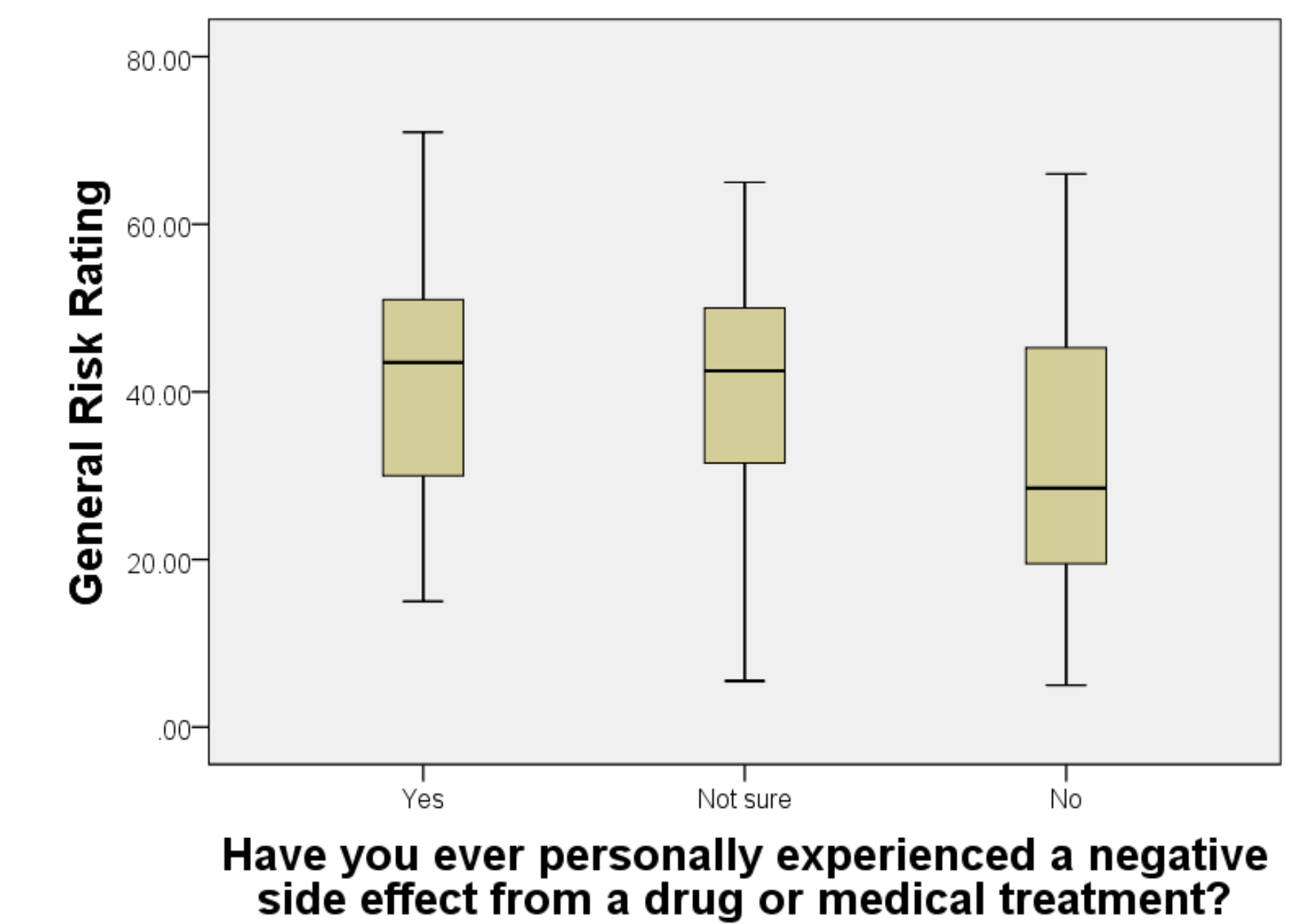


- Repeated measures ANOVA with H & F correction:  $F(5.12, 629.12) = 74.87, p < .001$ .
- Multi-step post-hoc comparisons showed four distinct groups with largest significant  $p < .001$ .

## GENERAL RISK RATING

- Correlated with 5/6 treatment-specific ratings at  $\alpha = 99\%$ .  $R$ s range between .42 - .58.
- Associated with personal experience of side effects.  $F(2, 121) = 6.25, p = .003$ .

General Risk Rating by Experience



- Correlated with willingness to pay to avoid side effects.  $R = .264, p = .003$ .
- General risk rating (but not the treatment-specific ratings) was predicted by numeracy.  $R^2 = .09, F(1, 122) = 12.05, p = .001, \beta = -.30$ .

## OTHER NOTES

- No order-of-presentation effects observed.
- Familiarity ratings (5 = extremely familiar): tDCS (1.34), SSRI (2.29), ibuprofen (3.93), antihistamine (3.02), flu vaccine (3.23), chemotherapy (2.90).

## DISCUSSION

For future side effect framing studies, we recommend using actual probability of side effects where possible, and 21-55% where treatment is unspecified or novel.

Further empirical work is needed to confirm the following hypotheses:

- The general risk rating is a good default indicator of perceived side effect risk.
- Higher numeracy is associated with lower risk estimates.
- People tend to rely less on the general risk rating for familiar treatments.

S. Jack Shuai, Dr. J. D. Jasper



#BetterPoster design by Mike Morrison



Take a picture to download this poster