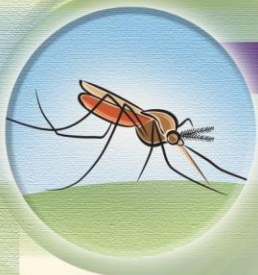




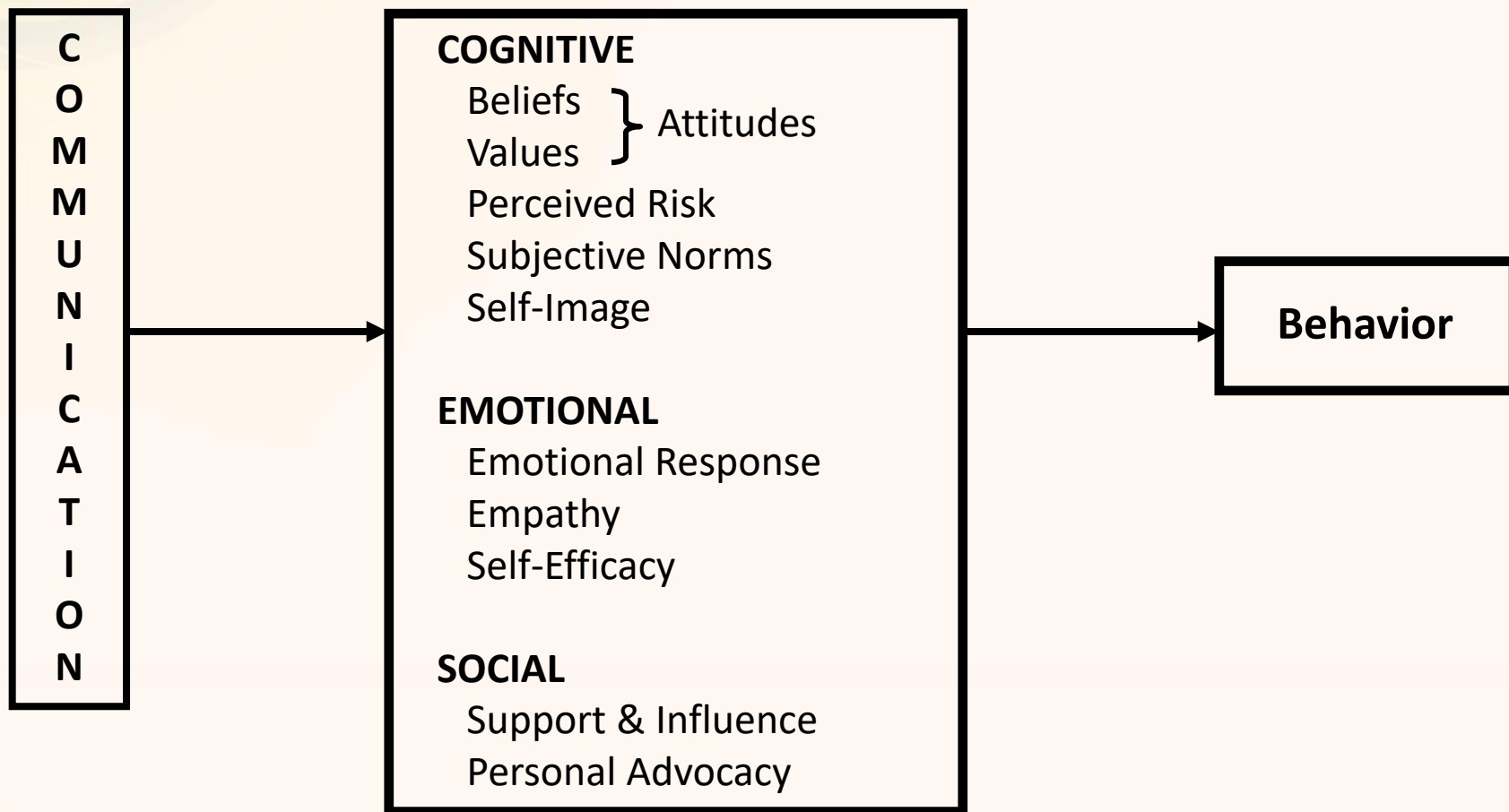
Part 4:

MEDIATION ANALYSIS: EVALUATING HOW A PROGRAM WORKED



A model of strategic communication and behavior change

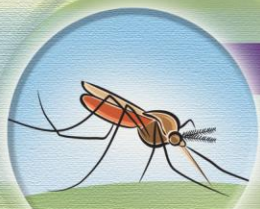
Ideation





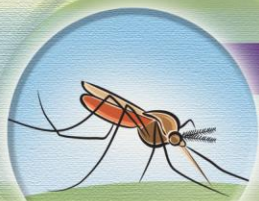
Theory-driven evaluation

- Identify causal pathways
(mediating variables for effect)
- Demonstrate:
 - Impact of **communication** on mediating variables
 - Impact of **mediating variables** on behavioral outcome



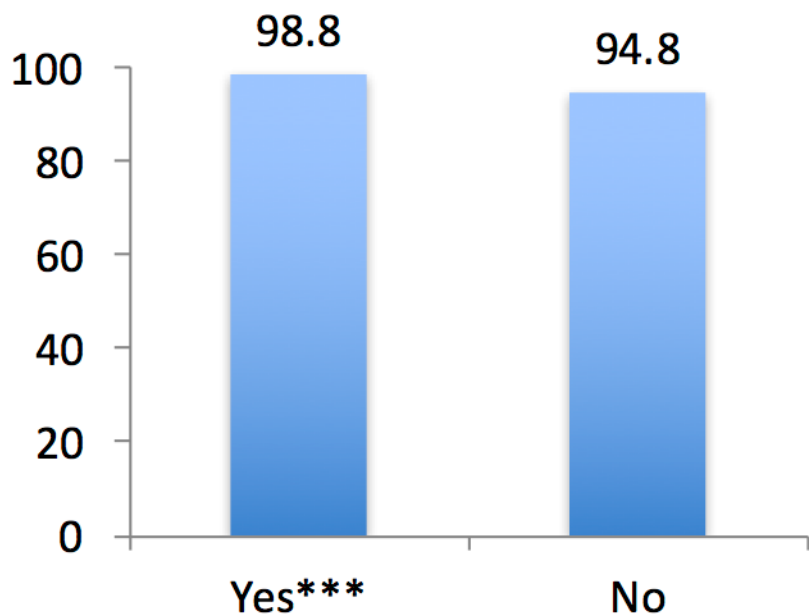
Explore the mediating pathways to understand how SBCC affected behavior

- Challenging to do with secondary data due to limited number of mediating variables
- Illustrate the approach with a single potential mediator:
 - Using data from the 2010 Zambia MIS
 - Do women recognize mosquitoes as the **sole** cause of malaria?
 - If people believe that malaria has various causes, this may affect whether they sleep under a mosquito net



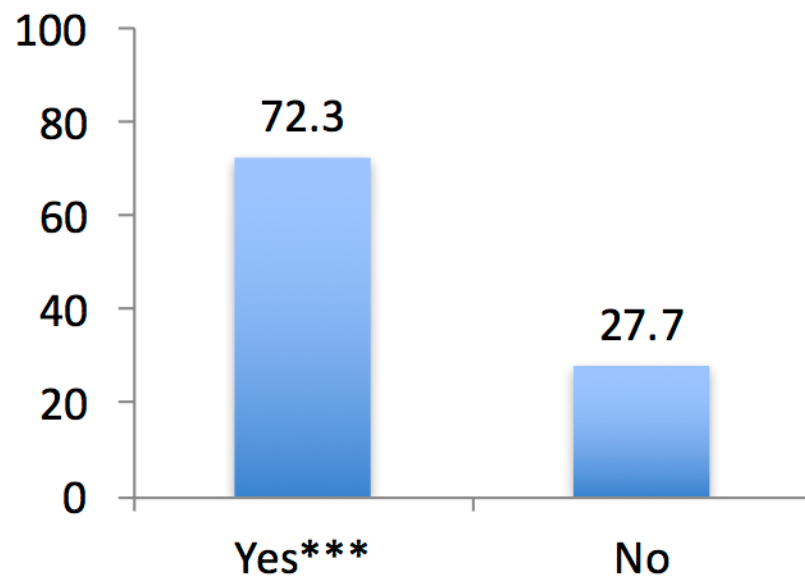
Examining the pathway that link exposure to SBCC and ITN use

% who believe mosquitos are sole cause of malaria, by exposure to SBCC messages



Exposed to SBCC messages about malaria

% who slept under an ITN the previous night, by belief in mosquitos as sole cause of malaria



Belief that mosquitos are sole cause of malaria

Source: 2010 Zambia Malaria Indicator Survey
Comparison between Yes and No: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

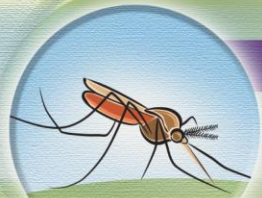


Direct and indirect effects of SBCC exposure on ITN use

	Coefficient	95% CI (bootstrapped SE)
Total effect of SBCC	0.159	0.116, 0.193
Direct effect of SBCC	0.139	0.097, 0.177
Indirect effect through belief that mosquitoes are sole cause of malaria	0.021	0.008, 0.035
Proportion of total effect mediated by belief that mosquitoes are sole cause of malaria	0.132	0.069–0.181

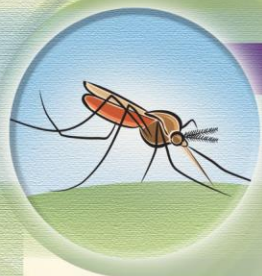
Source: 2010 Zambia Malaria Indicator Survey

Reference: Baron, R. M., & Kenney, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology*, 51(6): 1173-1182.



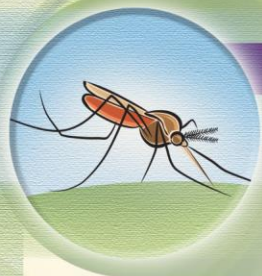
Combining these two approaches for a complete outcome evaluation of SBCC

- Propensity score matching to answer **if** it worked
- Mediation analysis to understand **how** it worked



In summary . . .

- SBCC outcome evaluations should strive to learn . . .
 - If a program was effective
 - How was the program effective
- There is a range of approaches for SBCC outcome evaluation, however . . .
 - Vary in the strength of their conclusions
 - Propensity score matching offers the strongest evidence



Additional Resources

Kincaid, D. L., Do, M. P. (2006). Multivariate causal attribution and cost-effectiveness of a national mass media campaign in the Philippines. *J Health Commun 11 Suppl 2*, 69-90.

Khandker, S. R., Koolwal, G. B., Samad, H. A., eds. (2010). Handbook on Impact Evaluation: Quantitative Methods and Practices. World Bank: Washington, DC.

Evaluation design for public health communication programs. Hornik RC. In: Hornik R. C., ed. (2002). *Public Health Communication*. Lawrence Erlbaum Associates: Mahwah, NJ; 385-408.