

Workshop Tasks

- Group 1 – Specify four propositions that identify factors that best predict college grades.
- Group 2 – Explain why an understanding of the process of theoretical models is relevant to emergency managers.
- Group 3 – Identify five propositions that Perry (1994) proposed regarding evacuation compliance.
- Group 4 – Explain the impacts of disaster agent on the components of Perry's (1994) model of evacuation compliance.

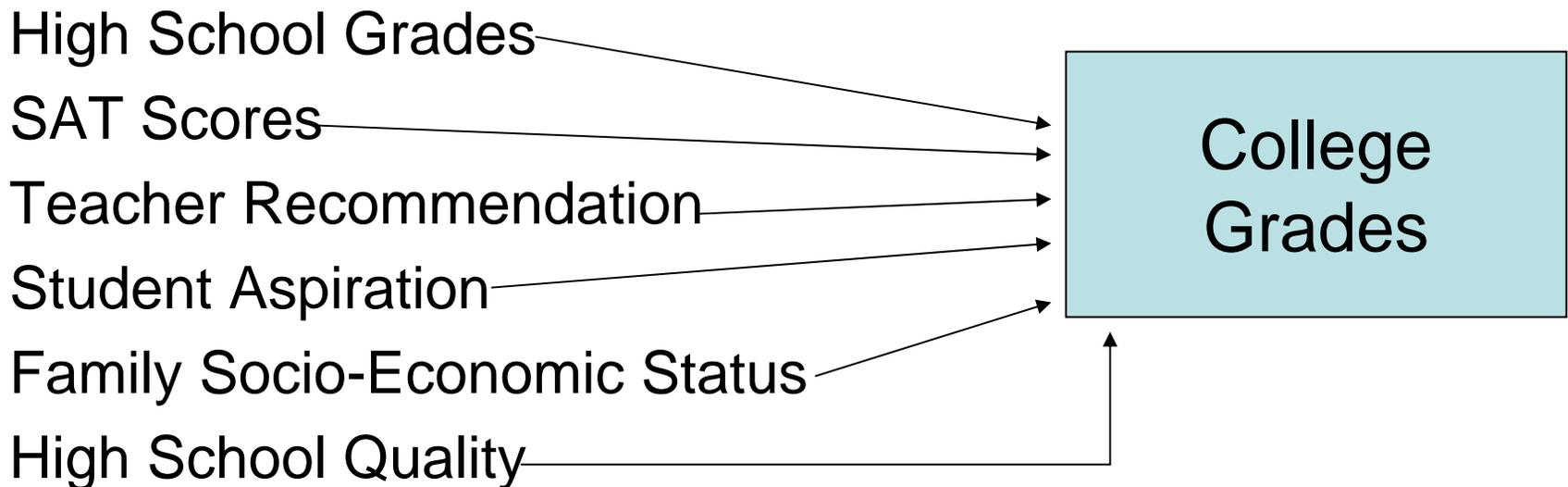
Session No. 14 Overview: Constructing Theoretical Models

1. What is a theoretical model?
2. Why construct theoretical models?
3. Relevance to emergency management
4. The steps in the model building process
5. Example: Evacuation Compliance Model

Predicting College Grades: A Simplified Multivariate Model

Independent
Variables

Dependent
Variable



Why Do Social Scientists Construct Theoretical Models

1. Single variable explanations are inadequate
2. Goal of generalization
3. Scientific reproducibility
4. Explanation in specified instances
5. Guidance to literature reviews
6. Analogy to road maps
7. Public policy guidance

Relevance to Emergency Management

1. Debunk common sense explanations
2. Comprehend future research studies
3. Training others
4. Participate in professional network
5. Avoid misapplications
6. Organize reading
7. Design future research
8. Disaster planning
9. Policy guidance

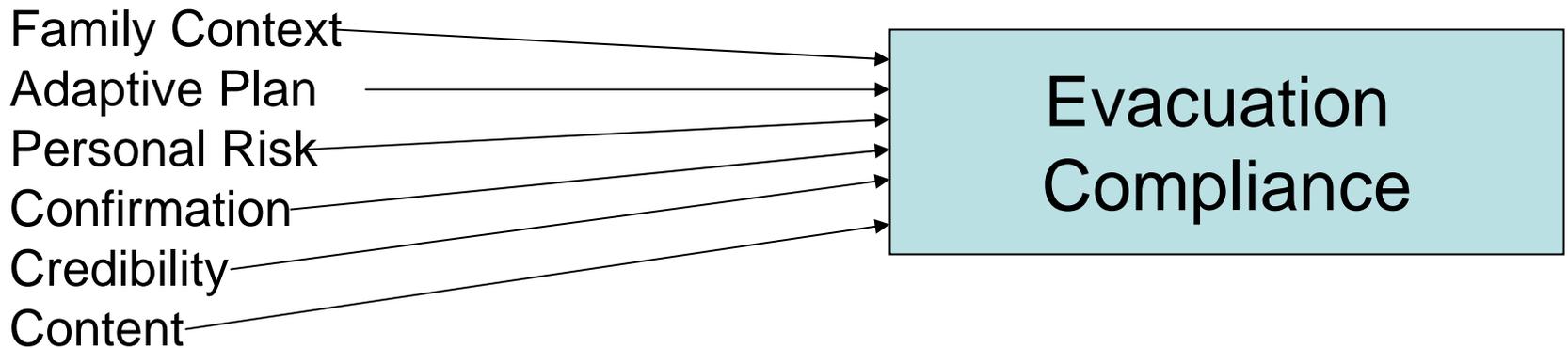
Constructing Theoretical Models

1. Observations
2. Define and delimit
3. Review literature
4. Organize concepts
5. Define variables
6. Create hypothesis network
7. Create measurements
8. Field test model
9. Revise model
10. Confirm revised model
11. Investigate range of external validity
12. Integrate model with related theory

Evacuation Compliance Model

Independent
Variables

Dependent
Variable



Source: Diagrammatic summary based on discussion and data tables in Perry, Ronald W. 1994. "A Model of Evacuation Compliance Behavior." Pp. 85-98 in *Disasters, Collective Behavior, and Social Organization* edited by Russell R. Dynes and Kathleen J. Tierney. Newark, Delaware: University of Delaware Press, pp. 89-95.

Disaster Agent Impacts

- Length of Forewarning
- Event Familiarity

Source: adapted from Perry, Ronald W. 1994. "A Model of Evacuation Compliance Behavior." Pp. 85-98 in *Disaster, Collective Behavior and Social Organization*, edited by Russell R. Dynes and Kathleen J. Tierney. Newark, Delaware: University of Delaware Press, pp. 96-97.

Revised Model of Evacuation Compliance: Independent Variables

- Situational Factors
 - A. Environmental Cues
 - B. Social Context
- Warning Components
 - A. Sources
 - B. Channels
 - C. Content
- Receiver Characteristics
 - A. Previous Experience
 - B. Prior Beliefs
 - C. Demographics
 - D. Personality
- Confirmation Actions
 - A. Information Needs Assessment
 - B. Communication Action Assessment
 - C. Communication Action Implementation
- Decision Dimensions
 - A. Risk Identification
 - B. Risk Assessment
 - C. Protective Action Search
 - D. Protective Action Assessment
 - E. Protective Action Implementation

Source: Adapted from Lindell, Michael K. and Ronald W. Perry. 2004. *Communicating Environmental Risk in Multiethnic Communities*. Thousand Oaks, California: Sage Publications, pp. 68-92.