

# Development of a Conceptual Model of Minority Participation in HIV Vaccine Research: Implications for Program Development within Black Communities

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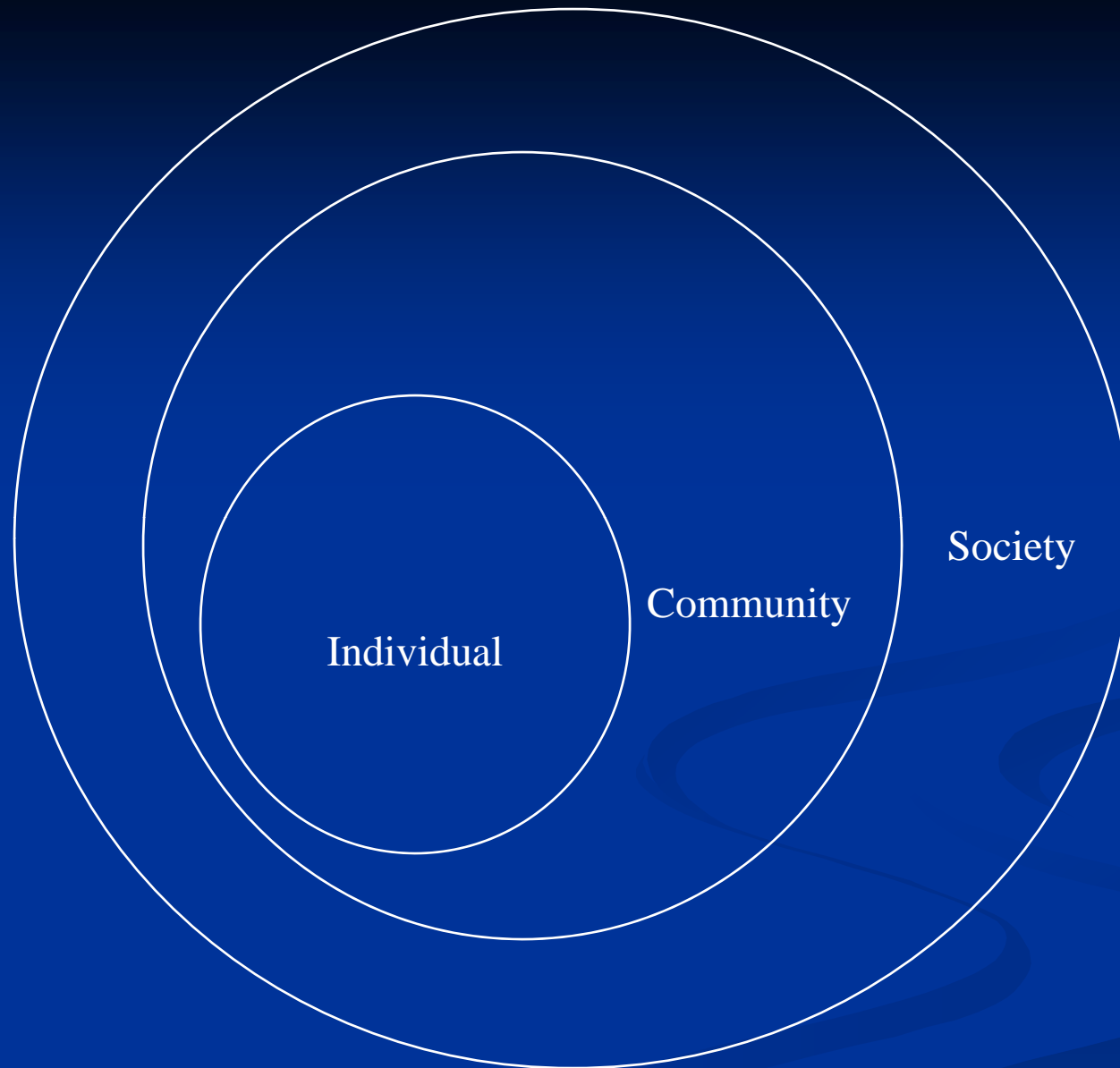


# HIV/AIDS Impact on US/Local Black Communities

- USA:
  - 61% female incident cases - Black women
  - Black MSM: 7.1x rate White MSM
- State of Georgia: 77% diagnosed AIDS cases (2005)
- Metropolitan Atlanta: 66% AIDS cases; 2 counties – 1/2
- Blacks underrepresented in HIV vaccine trials
  - Domestic:  $\leq 33\%$
  - Hope Clinic:  $\leq 30\%$  (Phase I and II)
- Calls to Action: AVAC, Black AIDS Institute, National Minority AIDS Council, Local Community Partners

# Cultivating Involvement of Blacks in HIV Vaccine Research

- Goal: Increased participation in all research aspects
- Key barriers:
  - Trust
  - Negative encounters
  - Perceived bias
- Community needs:
  - Information
  - Education
  - Research Relevance
- Atlanta HIV Prevention Research Community Coalition (APRCC)



**Dynamic Socioecological Interchange**

# Conceptual Framework

- TRA – powerful analytic structure
  - Motivational model
  - Intrapersonal and societal influences

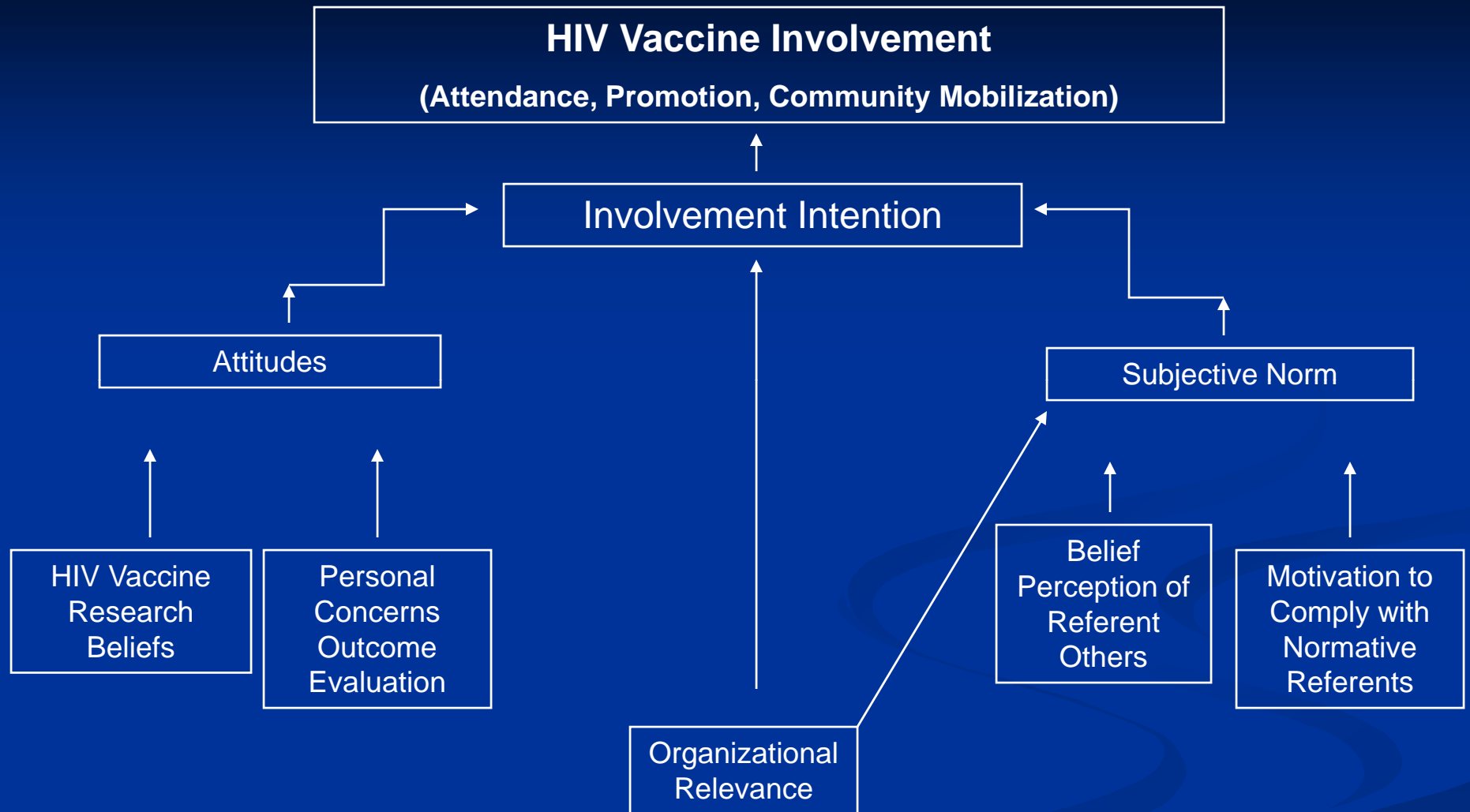
*Promoting HIV Vaccine Research in African American Communities: Does the Theory of Reasoned Action Explain Potential Outcomes of Involvement? (Frew, Archibald, Martinez, et al., 2008)*

- “Consumer involvement” – affective appraisal

*Factors Influencing HIV Vaccine Community Engagement in the Urban South (Frew, del Rio, Clifton, et al, 2008)*

- Health research participation:

**Cognitive + Affective**



# Data Collection

- Recruitment: August 2007 – January 2008
- Sample accrual: APRCC Event/Activity Participants
- N = 362 (Black/African Americans)
- $\geq 18$  years
- Read and understand English
- Written informed consent
- Incentive: health promotion item

# Analytic Strategy

- Data scanned for missing values and normality (Q-Q plots + variance estimates)
- Scale Items: Mean Multiple Imputation
  - Little's MCAR:  $\chi^2_{4538} = 5106.22, p < 0.01$
- Scale Internal Consistencies ( $\alpha = 0.771-0.881$ )
- 3-Stage Least Squares Parameter Estimates
  - Each construct assessed
  - At least 1 indicator fixed to define the scales
  - RMSE, Chi-Square

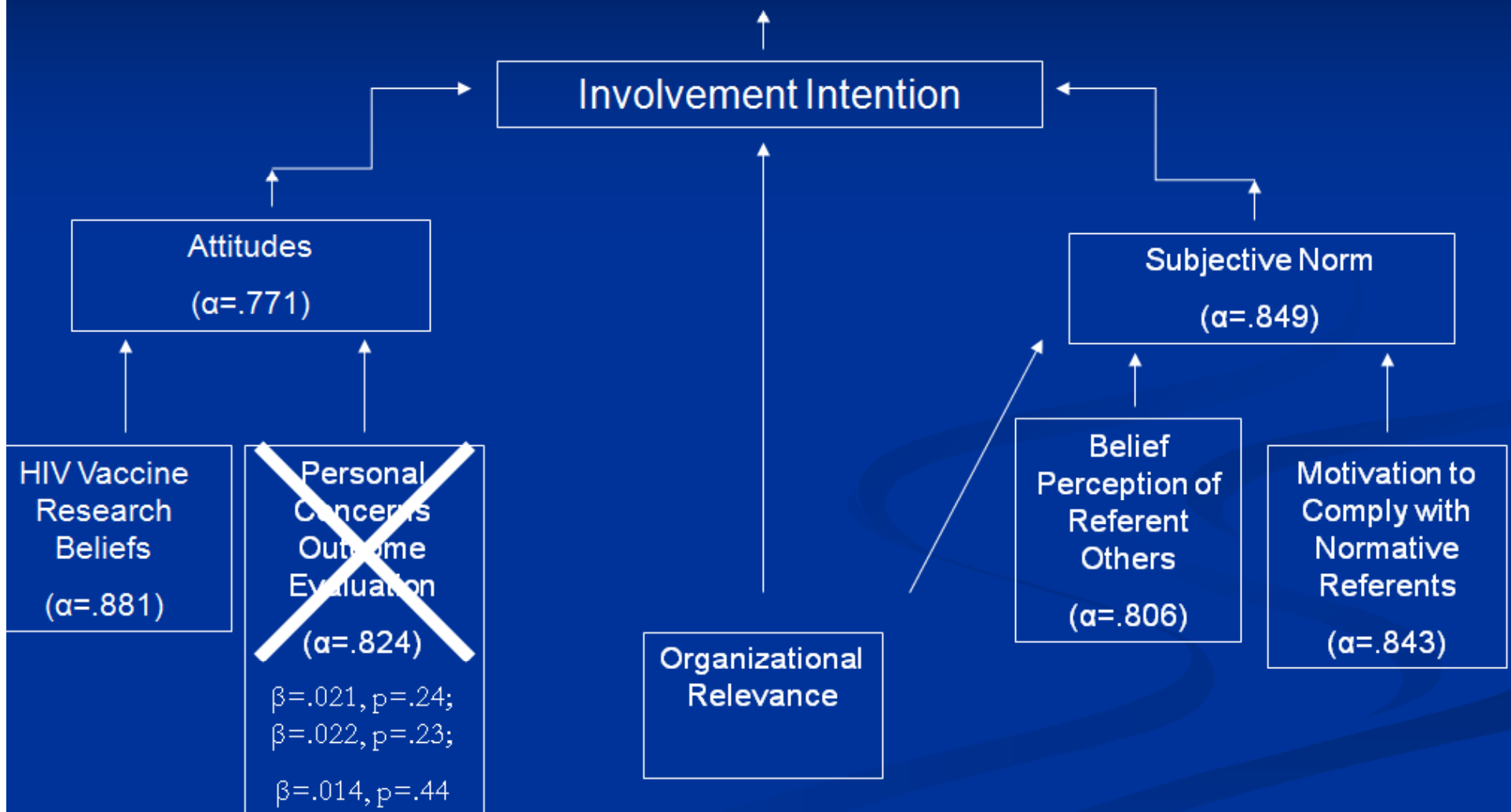


# Sample Demographics

## (N = 362)

- Mean = 37.0 years (18-67)
- 63.3% female (n = 229)
- 68.9% heterosexual (n = 246)
- 53.2% employed full time (n = 191)
  - 61.2% ≤ \$40,000 income (n = 216)
- Education:
  - 34.0% K-12 (n = 123)
  - 28.7% Technical/Vocation (n = 104)
  - 37.3% Bachelor's Degree or higher (n = 135)

# HIV Vaccine Involvement



# HIV Vaccine Involvement

Future Attendance  $\chi^2_{(3)}=34.22, p<.01$

Involvement Intention

Attitudes  
( $\alpha=.771$ )

$\beta=.148, p<.01$

HIV Vaccine  
Research  
Beliefs  
( $\alpha=.881$ )

$\beta=.529, p<.01$

Subjective Norm  
( $\alpha=.849$ )

$\beta=.059, p=.41$

Belief  
Perception of  
Referent  
Others  
( $\alpha=.806$ )

$\beta=.435, p<.01$

Motivation to  
Comply with  
Normative  
Referents  
( $\alpha=.843$ )

$\beta=.044, p=.01$

Organizational  
Relevance

$\beta=.201, p=.03$

# HIV Vaccine Involvement

Vaccine Promotion  $\chi^2_{(3)}=92.09, p<.01$

Involvement Intention

Attitudes  
( $\alpha=.771$ )

$\beta=.219, p<.01$

HIV Vaccine  
Research  
Beliefs  
( $\alpha=.881$ )

$\beta=.529, p<.01$

Subjective Norm  
( $\alpha=.849$ )

$\beta=-.007, p=.88$

Belief  
Perception of  
Referent  
Others  
( $\alpha=.806$ )

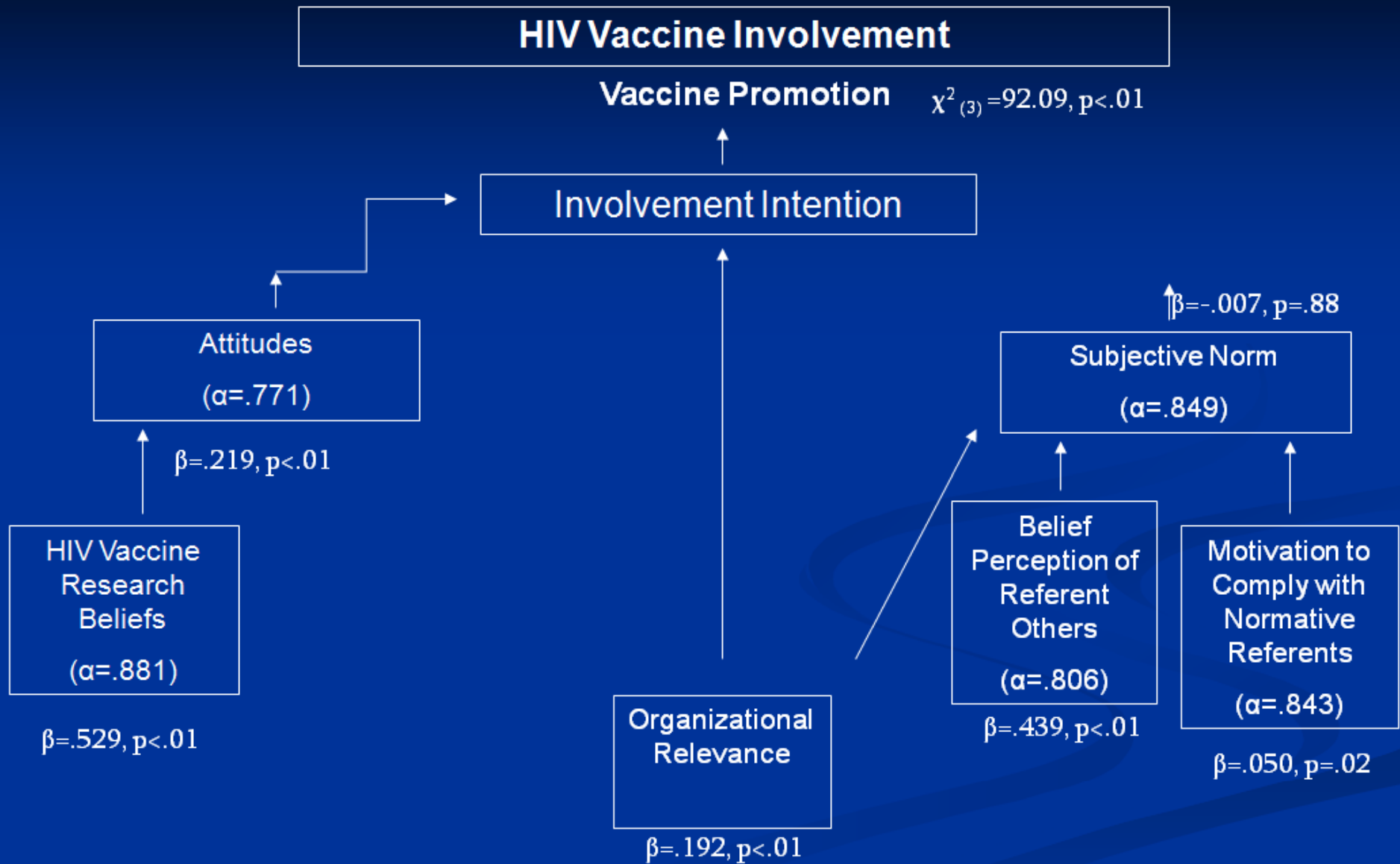
$\beta=.439, p<.01$

Motivation to  
Comply with  
Normative  
Referents  
( $\alpha=.843$ )

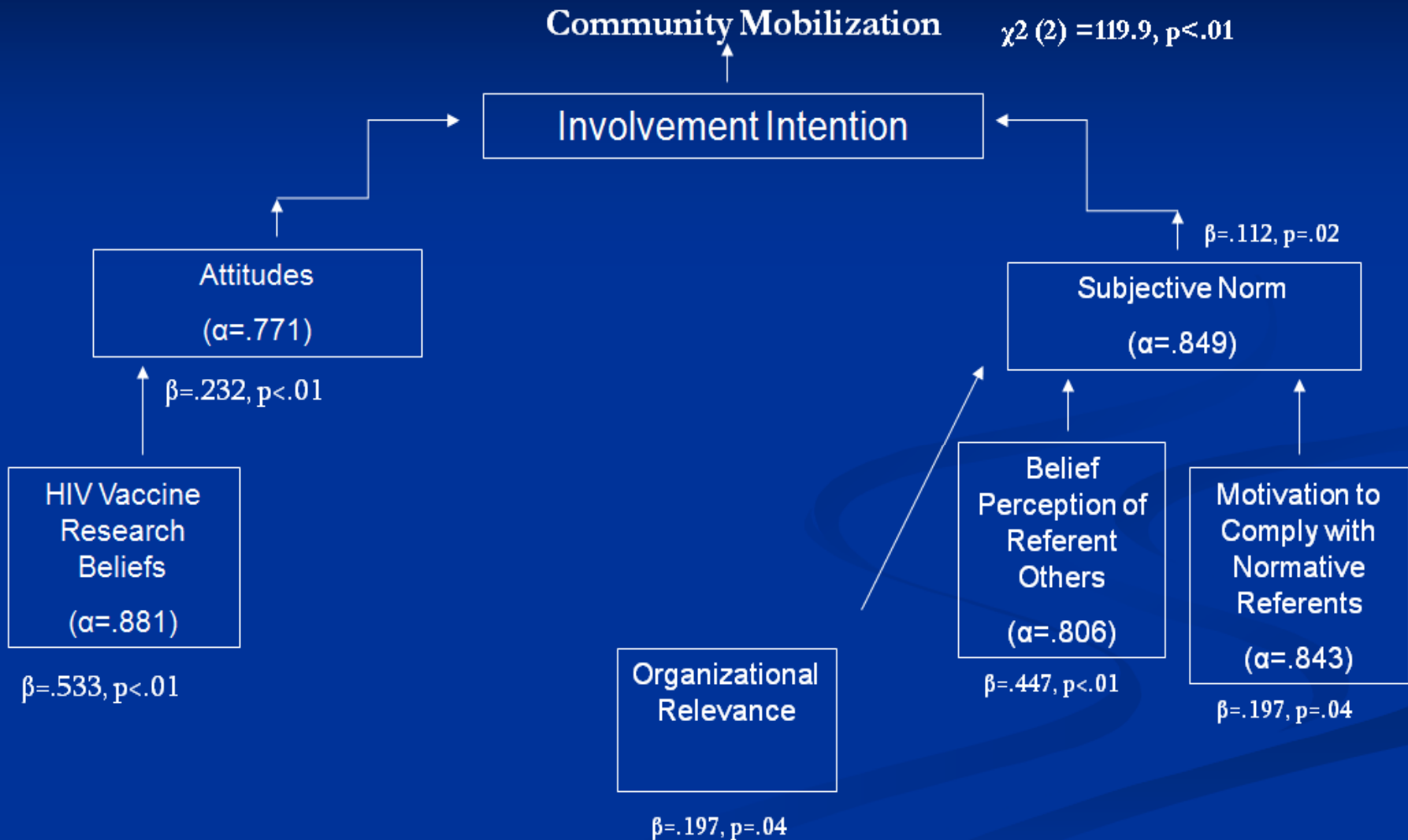
$\beta=.050, p=.02$

Organizational  
Relevance

$\beta=.192, p<.01$



# HIV Vaccine Involvement



# Key Findings

- Chain of relations observed
  - Attitudes highly predictive
  - Beliefs very influential “background” constructs
- Time constraints, fear of needles, concerns about vaccine-induced seropositivity, other study-related issues not significant relation to community engagement outcomes

# Organizational Relevance

- Consistent pathway effects
  - Favorable attribution to study site
    - Alignment with Hope Clinic = greater participation
      - Trust
    - A form of self-expression via involvement
    - Social approval

# Implications

"All the News  
That's Fit to Print"

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THURSDAY, NOVEMBER 8, 2007

### In Tests, AIDS Vaccine Seemed to Increase Risk

By LAWRENCE K. ALTMAN  
and ANDREW POLLACK

In a puzzling and potentially troubling development, an AIDS vaccine tested in a closely watched trial might have increased the risk among vaccine recipients of becoming infected with H.I.V., researchers reported yesterday at a scientific meeting in Seattle.

But the researchers said not enough data existed to determine the meaning of the findings about the vaccine, which is made by Merck.

The increased risk was principally among a group of people who had pre-existing levels of immunity to a common cold virus known as adenovirus type 5,

In late September, experiments expected to lower the risk of infection among vaccine recipients by 49 percent failed to lower the risk of becoming infected with H.I.V. among 3,000 vaccine recipients in the United States.

The vaccine is made by Merck. The increased risk was principally among a group of people who had pre-existing levels of immunity to a common cold virus known as adenovirus type 5,

But the new analysis looked at all the trial participants and found a wider difference — 49 in the vaccinated group compared with 33 in the placebo group. Further analysis showed that the imbalance was much more appar-

*A finding that raises questions about using viruses against H.I.V.*

THURSDAY, NOVEMBER 8, 2007



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### Failure of AIDS vaccine punctures soaring hopes

IT MAY ACTUALLY HAVE INCREASED HIV RISK

Goal now seems even more distant than thought

BY KYUNG M. SONG  
AND CAROL M. OSTROM  
*Seattle Times health reporters*

The resounding failure of an AIDS vaccine that was tested with great fanfare in Seattle and around

the world has left researchers with plenty of theories — but as far as ever from the long-sought holy grail in the fight against the pandemic.

Researchers gathered in Seattle on Wednesday for a three-day con-

ference admitted they were both startled and disheartened by the revelation that the much-hailed "STEP Study" vaccine may actually have put volunteers at an even greater risk of developing HIV than reported last month. HIV-negative men who received the test vaccine actually ended up with more cases of infections than men who got placebo injections.

The vaccine had been only the second ever to reach wide testing in humans, and early phases had shown so much promise that scientists spoke excitedly as recently as last winter of finally finding an elusive vaccine.

This latest blow has prompted some even to question whether any vaccine will ever be successful

Please see > AIDS, A7



# Programmatic Implications

- Greater community engagement possible with dynamic participatory model
- Clinical site linkages with community-based partner organizations
  - Unique ability to reach women and minorities
    - Knowledgeable, Credible, Trusted, Visible, Stable
    - Clinical presence and demonstrated community support – favorable opinion and trust

# Formulas for Action

- **Future community attendance = positive attitudes**
  - Focus on cultivating favorable assessment of health research and HIV vaccine development
- **HIV vaccine promotion = Positive attitudes + favorable site appraisal**
  - Focus on positive health research and HIV vaccine messages and the role of the clinical research site in the community
- **Community mobilization = Positive attitudes + favorable site appraisal + perceived normative support**
  - Focus on positive messages on health research and HIV vaccines, the role of the clinical research site in the community, and cultivate support from important others

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