

**Correlates of HIV-related stigma and  
discrimination attitudes among couples in North  
India: gender differences and the moderating role  
of HIV/AIDS knowledge**

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# Study objectives

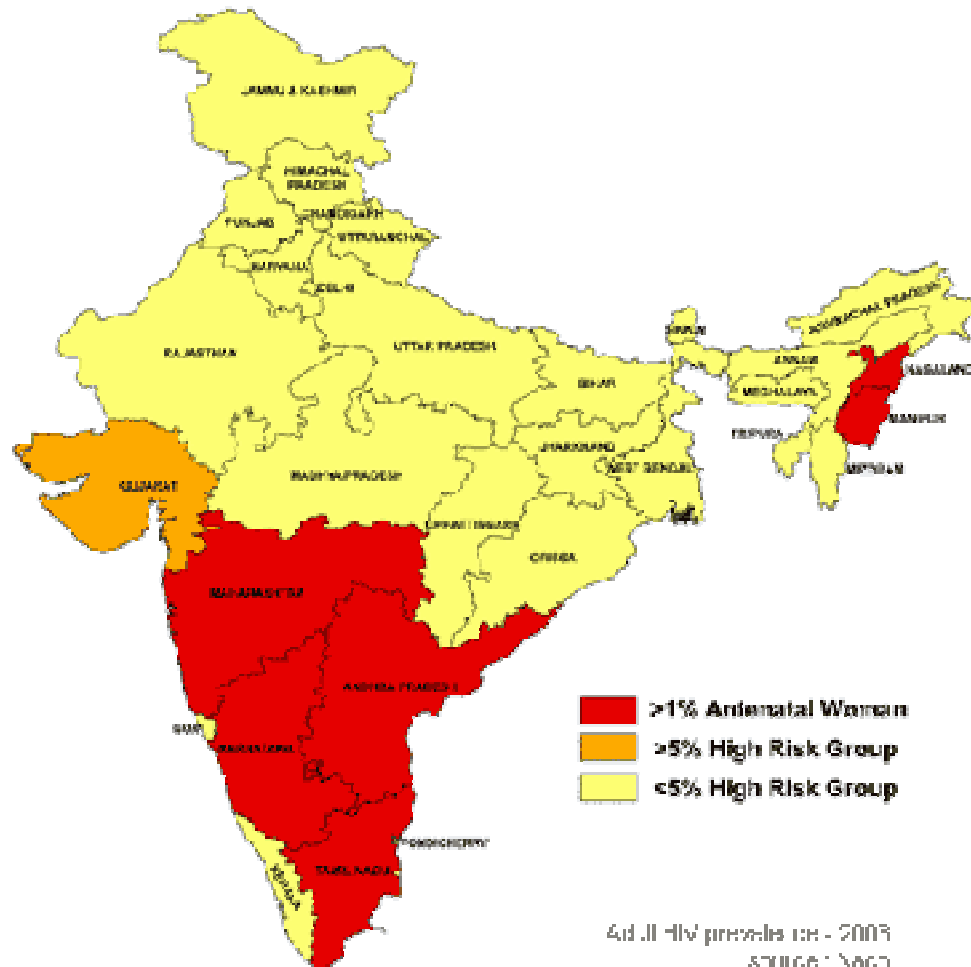
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- Do stigmatizing and discriminatory attitudes towards people living with HIV/AIDS differ by gender in the general population of North India?
  - Does knowledge of HIV/AIDS modify this relationship?
- Why examine gender differences in HIV/AIDS stigma and discrimination attitudes?
  - Men's and women's differing roles in Indian society may adversely and differentially affect the health and well-being of persons living with HIV/AIDS in the presence of HIV/AIDS stigmatizing attitudes.

# Outline

- Describe HIV/AIDS context in India and study area
  - Review study methods and measures
  - Present relevant descriptive statistics
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- Report logistic regression results
    - Address Learning Objectives I thru III
  - Discuss study relevance to HIV/AIDS interventions
    - Address Learning Objective IV

# HIV/AIDS in India

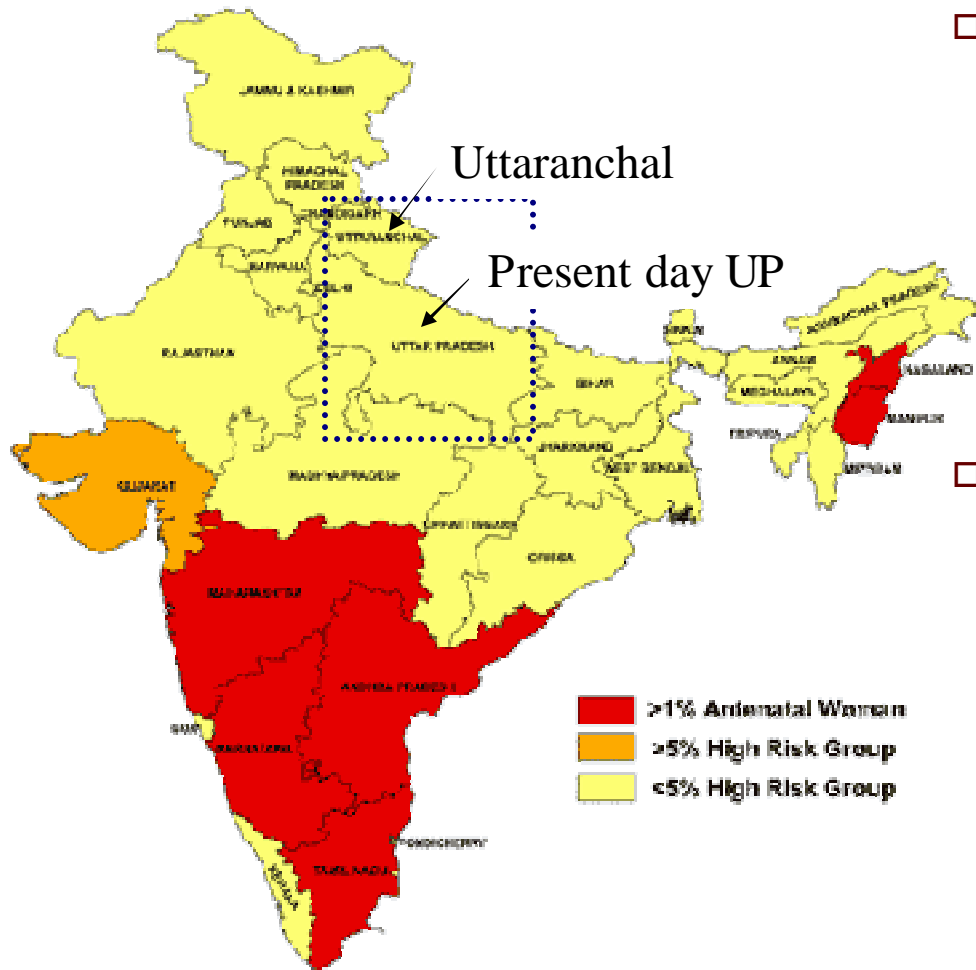


- Over 2.5 million people are living with HIV/AIDS in India followed by South Africa and Nigeria
- HIV/AIDS awareness and knowledge is low in the country, especially compared to African nations

Source: NACO

# HIV/AIDS in Study Area:

*Uttar Pradesh (UP) and Uttaranchal (former hill region of UP)*



- Socio-demographics
  - UP is India's most populous state, but least developed
  - Fertility and mortality rates are higher relative to other Indian states
  - Health service infrastructure is poor
- HIV/AIDS
  - HIV/AIDS knowledge is markedly lower in UP as compared to national figures
  - HIV/AIDS cases are projected to rise rapidly
  - According to recent reports from 2006, three districts report HIV prevalence over 1% among antenatal women; and HIV prevalence has increased among most-at-risk groups in UP

# HIV-related stigma and discrimination

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*"HIV-related stigma and discrimination remain an immense barrier to effectively fighting the most devastating epidemic humanity has ever known. . .If HIV-related stigma and discrimination are not tackled, AIDS will blight the 21st century."*

*-- Dr Peter Piot, Executive Director of the Joint United Nations Programme on HIV/AIDS (UNAIDS)*



# HIV-related stigma and discrimination in India

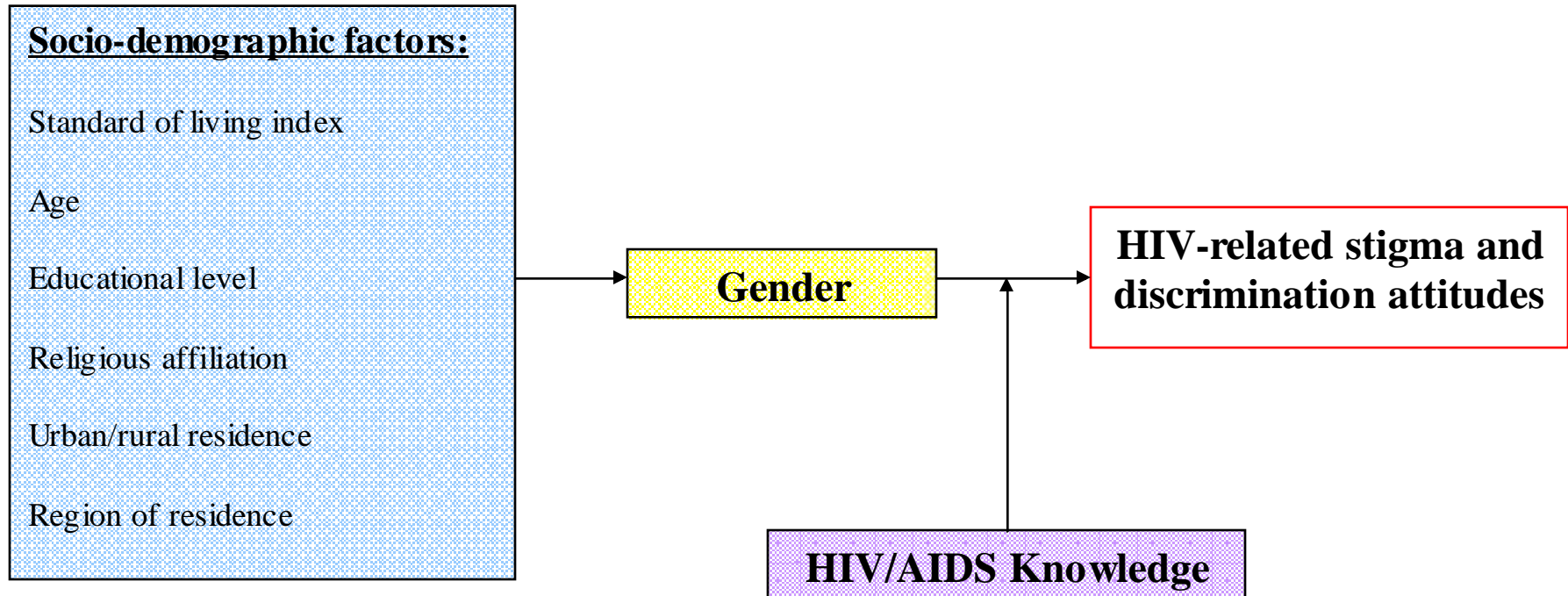
- HIV-related stigma and discrimination attitudes and behaviors have been widely documented in India
  - In a group of uninfected college students, 34% felt it would be better if infected individuals killed themselves (1997).
  - In a sample of people living with HIV/AIDS, over a third had not disclosed their status due to fear of discrimination and bringing disgrace to family and self (2003).
  - Among 52 HIV+ pregnant women who disclosed their status to family, 23% were beaten or abused by their in-laws (2004).



Source: Ambati et al. 1997, Chandra et al. 2003, Medley et al. 2004

# Conceptual framework

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# Study significance

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- No population-based study has systematically examined correlates (much less the prevalence) of stigma and discrimination attitudes in the country
- The study findings address these gaps in the literature and will facilitate development of stigma-reduction interventions in the Indian context, particularly North India

# Study Design and Sample



- Data are a part of a larger NIH-funded study that explored the potential for the spread of HIV in Uttar Pradesh and Uttaranchal
- Conducted from January to July 2003
- Probability survey of 3,385 married couples (6,670 men and women) residing in UP and Uttaranchal
- UP was divided into four geographic regions and Uttaranchal was the fifth (hill) region of UP but later became its own state
- By design, the sample has an urban focus. Two-thirds of the 3,385 couples interviewed resided in urban areas and a third resided in rural places within each region
- **Study sample: N=4,704 out of 6,670 of total sample (1,955 women and 2,749 men)**



# HIV-related stigma and discrimination items

Yes/Don't know=1, No=0

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- 1) If a member of your family became ill with the AIDS virus, would you want it to remain a secret?
- 2) If a member of your family became sick with AIDS, would you be willing to care for him or her in your home? (recoded)
- 3) If a teacher has the AIDS virus but is not sick, should he/she be allowed to continue teaching in school? (recoded)
- 4) If you knew that a shopkeeper or food seller has the AIDS virus, would you buy vegetables from them? (recoded)



# Knowledge of HIV/AIDS items

Yes=1, No/Don't Know=0

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- 1) Can a person who looks healthy be infected with the AIDS virus?
- 2) Can a people reduce their chances of getting infected by using a condom correctly every time they have sex?
- 3) Can people reduce their chances of getting infected by having only one partner?
- 4) Can the AIDS virus be passed from mother to child?
- 5) If a mother is infected with the AIDS virus, is there any way to prevent transmission to the baby?
- 6) Can people get infected by sharing a meal with HIV+ person?  
(recoded)
- 7) Can a person get infected by shaking hand's with HIV+ person  
(recoded)
- 8) Can a person get infected through mosquito bites? (recoded)

## Descriptive characteristics of women and men who have heard of HIV/AIDS living in Uttar Pradesh and Uttaranchal, India 2003

<b>Demographics</b>	<b>Women (N=1,955)</b>	<b>Men (N=2,749)</b>
Age (mean years)	31.6	<b>36.2</b>
Education (mean years)	7.9	<b>9.2</b>
Area of residence		
Urban	86.2	73.4
Rural	13.8	26.6
Religion		
Hindu	79.5	81.7
Muslim	18.3	16.7
Other	2.2	1.6

## Descriptive characteristics of women and men who have heard of HIV/AIDS living in Uttar Pradesh and Uttaranchal, India 2003 (continued)

<b>HIV/AIDS knowledge (select items)</b>	<b>Women (N=1,955)</b>	<b>Men (N=2,749)</b>
No, HIV cannot be prevented by using a condom correctly each time you have sex (%)	34.9	24.3
Yes, HIV is spread by shaking hands with an HIV+ person (%)	28.7	18.8
Mean HIV knowledge score summed across 8 items	4.4	<b>4.7</b>

## Descriptive characteristics of women and men who have heard of HIV/AIDS living in Uttar Pradesh and Uttaranchal, India 2003 (continued)

<b>HIV/AIDS stigma and discrimination (select items)</b>	<b>Women</b> (N=1,955)	<b>Men</b> (N=2,749)
Would not buy vegetables from HIV+ shopkeeper (%)	34.1	<b>51.1</b>
Would not care for HIV+ family member (%)	29.2	34.0
Reported any stigmatizing attitude across four question items (%)	60.7	74.1

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# Learning Objectives

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- I. Describe socio-cultural correlates of perceived HIV-related stigma and discrimination
- II. Evaluate logistic regression models that explain perceived HIV-related stigma and discrimination
- III. Understand gender differences and the modifying role of HIV/AIDS knowledge with respect to perceived HIV-related stigma and discrimination
- IV. Discuss factors that may be targeted in HIV/AIDS programming and stigma-reduction interventions

Robust logistic regression and conditional logistic regression results on the probability of **any stigmatizing attitude** among couples who have heard of HIV/AIDS living in Uttar Pradesh and Uttaranchal, India 2003

Variables		Logit <sup>1,a</sup> (robust errors)	Clogit <sup>2,a</sup> (robust errors)
Gender	Male	<b>1.68**</b> (0.13)	<b>1.41*</b> (0.13)
	Female	Ref	Ref
HIV/AIDS knowledge scale		<b>0.66**</b>	<b>0.68**</b>
Gender x HIV/AIDS knowledge scale		<i>significant in both models (p&lt;0.01)</i>	

\*\* p<0.01

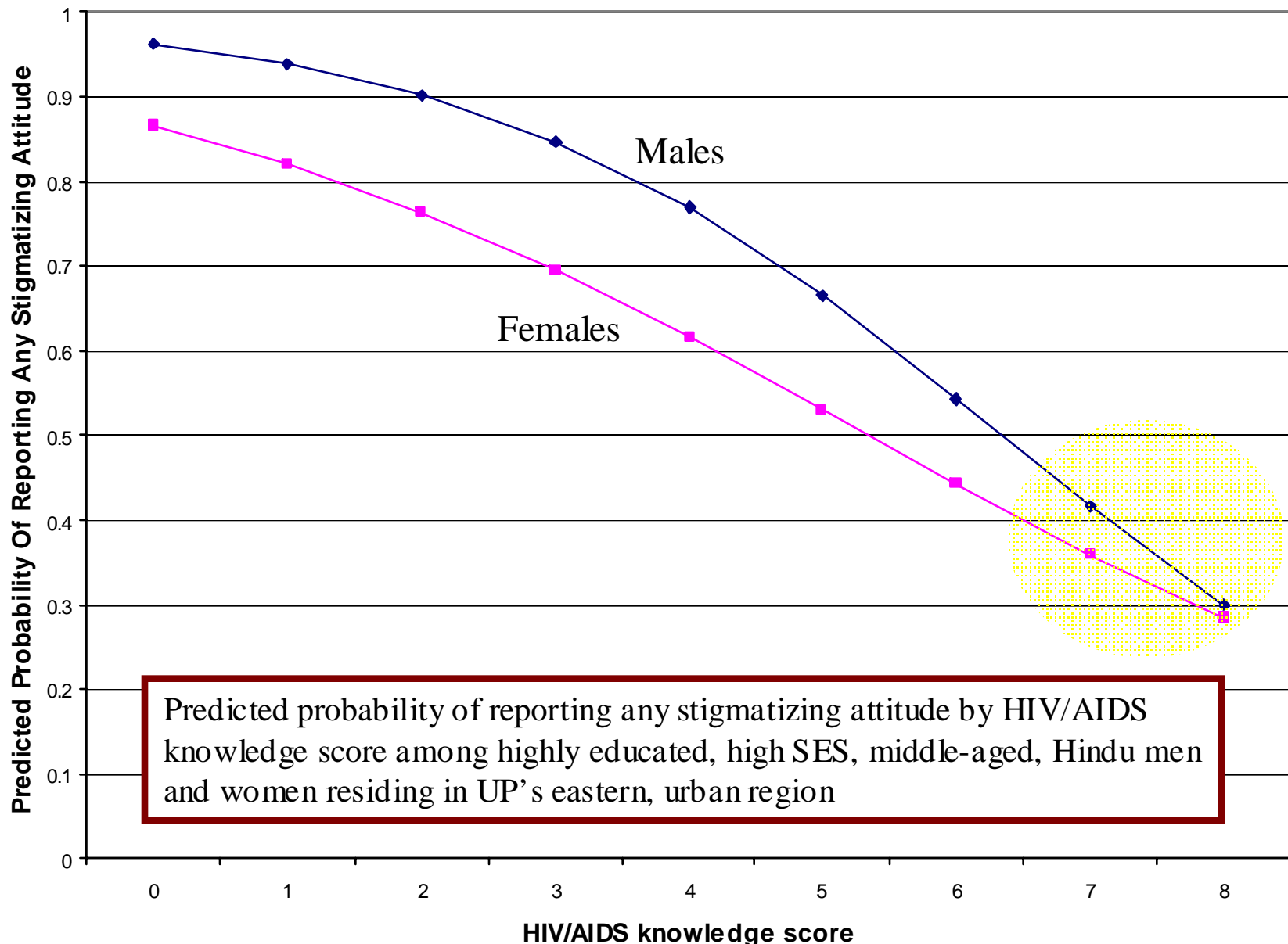
\* p<0.05

<sup>1</sup>Holding age, education, standard of living, religion, urban/rural residence, region constant

<sup>2</sup>Holding age, education constant

<sup>a</sup>controlling for multiple stage sampling

# Interaction effect: Gender and HIV/AIDS knowledge



Predicted probability of reporting any stigmatizing attitude by HIV/AIDS knowledge score among highly educated, high SES, middle-aged, Hindu men and women residing in UP's eastern, urban region



# Study Strengths and Limitations

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## □ Limitations

- Data based on self-report and prone to social desirability bias
- HIV-related stigma and discrimination are not comprehensive

## □ Strengths

- First population-based study to document correlates of HIV-related stigma and discrimination in India, particularly North India



# Conclusions

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- Few evidence-based HIV stigma-reduction interventions have been implemented
  - Due to lack of in-depth research studies on the topic that are population-based
  
- However, there is growing interest in public health to implement such interventions in an evidence-based fashion
  - e.g., Cochrane review protocol



## Conclusions

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- The current study contributes directly towards this burgeoning area of public health practice
- Study findings suggest that Indian men and women should be differentially targeted while concomitantly increasing HIV/AIDS knowledge in HIV programming efforts