

# The Relationship between Recent Condomless Sex and Willingness to Use injectable PrEP among Transgender Women and MSM In India: Testing The Mediating Role Of Risk Perception

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WEPEC211

## Background

- Several theories (e.g., Risk Perception Attitude framework) and empirical findings indicate that risk perception may predict future behaviors or intentions to adopt healthy behaviors, and that past behaviors can influence risk perception.
- We tested the hypothesis that recent condomless anal sex (CAS) will predict willingness to use injectable PrEP through increased risk perception among TGW and MSM.

## Methods

- In 2022, we conducted online/self-administered and offline/interviewer-administered surveys among 250 TGW and 251 MSM in Chennai.
- We collected data on CAS with last male non-regular partner (yes/no), risk perception score (“To what extent are you afraid you might contract HIV?: ‘not at all afraid’=0, ‘to very afraid’=3”), oral PrEP awareness/use, and willingness to use injectable PrEP (yes/no).
- Causal mediation analysis was used in Stata-18 to estimate the natural direct (NDE), indirect (NIE), and total (TE) effects on willingness to use injectable PrEP.

## Results

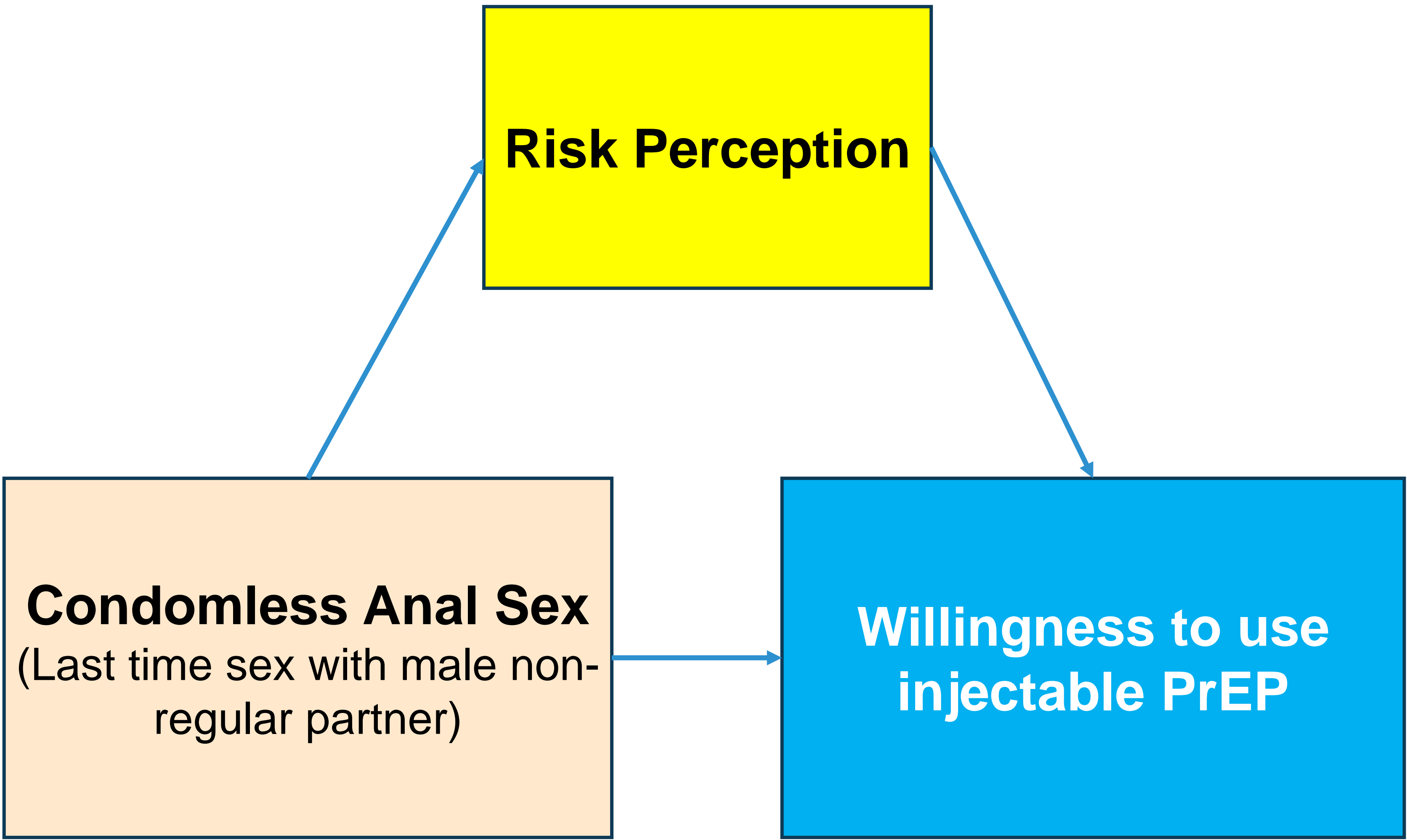
**Descriptives:** Participants’ mean age was 29 years (SD=5.7) for TGW and 30 years (SD=6.9) for MSM. Engagement in sex work: TGW=93.9%; MSM=39.2%. CAS was higher among MSM (41.5%) compared to TGW (21.7%;  $p<.001$ ).

### Mediation analysis results:

**TGW:** CAS had significant direct (NDE=0.35, 95% CI 0.25 to 0.46,  $p<.001$ ) and total (TE=0.41, 95% CI 0.28 to 0.54,  $p<.001$ ) effects on willingness to use injectable PrEP, and a significant indirect effect through risk perception (NIE=0.06, 95% CI 0.01 to 0.10,  $p<.01$ ; proportion mediated=15%).

**MSM:** There were no significant TE, NDE or NIE; however, among MSM who engage in sex work, CAS had a significant direct and total effects on willingness to use injectable PrEP (NDE=0.19, 95% CI 0.04 to 0.35,  $p=.02$ ; TE=0.19, 95% CI 0.04 to 0.34,  $p=.02$ ).

**Diagram 1. Conceptual Model: Effect of Condomless Anal Sex on Willingness to Use Injectable PrEP, through Risk Perception**



## Conclusion

- Our findings support the mediating role of risk perception in the association between CAS and willingness to use injectable PrEP among TGW.
- Among MSM, as CAS was not associated with risk perception, strategies to increase accurate HIV risk perception, along with PrEP education campaigns and affordable/subsidized pricing, may increase willingness to use injectable PrEP.