

Antecedents of Oral-SIT Beliefs Following Exposure to HIV Oral Self-Testing

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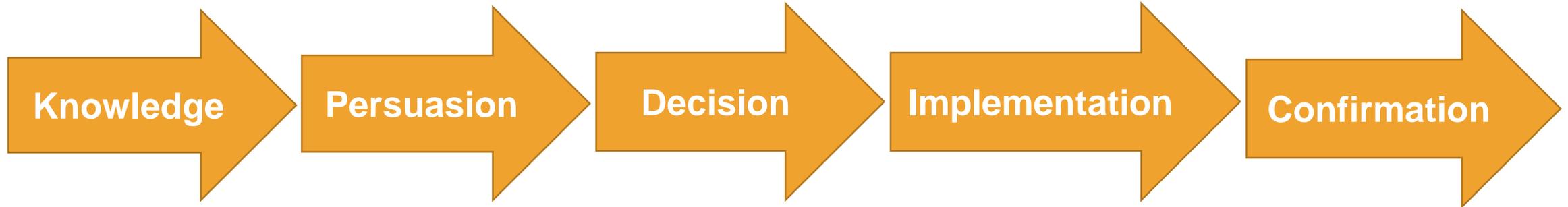
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Background

- HIV testing is a critical component of HIV prevention, but current venue-based testing strategies are not sufficiently reaching high-risk populations in the US including young, African American men-who-have-sex-with-men (AAMSM)^{1,2}
- Barriers to venue-based testing are often related to access, inconvenience, privacy concerns, and stigma^{1,3}
- Oral self-implemented HIV testing (Oral-SIT) can improve the reach of HIV testing, facilitate more frequent and repeat testing, and improve linkage to care⁴⁻⁸

Diffusion of Oral-SIT

- Although MSM report favorable attitudes toward Oral-SIT, use among young AAMSM remains minimal^{1,4,9-11}
- Diffusion theory can provide a useful conceptual framework for mitigating barriers and improving the reach of Oral-SIT¹²



Trialability of an Innovation

- ❖ People can learn about an innovation through media and social networks, but direct experience has the most powerful influence on belief formation
- ❖ Innovations that can be tried first are generally adopted more quickly
- ❖ Experimental trial occurs in Decision stage, before choice to adopt/reject

Oral-SIT Beliefs (OSB)

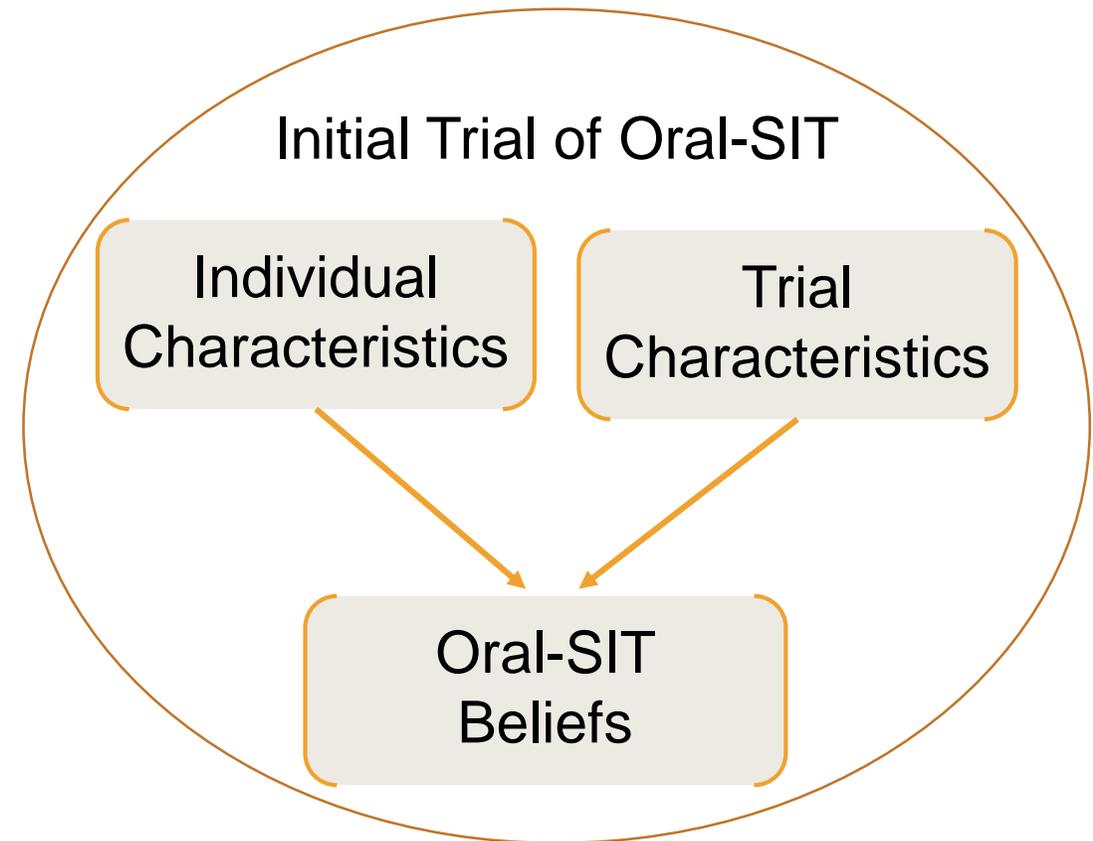
- ❖ The formation of innovation-related beliefs in the context of trialability (e.g., after initial trial) is not well understood
- ❖ Oral-SIT belief formation has important implications for facilitating adoption and repeated testing
- ❖ Prior research highlights factors that may act as antecedents to the formation of Oral-SIT beliefs (e.g., kit cost, social stigma)¹³⁻¹⁷

Current Study

Examines individual characteristics associated with more positive beliefs about Oral-SIT among young (17-24 yrs.) AAMSM in Chicago, following an initial trial

Sample (n=181):

- HIV negative (76%); status unknown (24%)
- 33% < high school education
- 24% unemployed & not in school
- Never used Oral-SIT



Methods

Dependent Variable: Oral-SIT Beliefs (OSB)

[Composite scale; higher score = more positive beliefs]

Items	Coding
➤ The HIV oral self-test is pretty easy to use.	1 = Strongly disagree 2 = Somewhat disagree 3 = Somewhat agree 4 = Strongly disagree
➤ The oral self-test would be a good way for <i>me</i> to test myself for HIV.	
➤ The oral self-test is a good way for <i>other people</i> to test themselves for HIV.	
➤ The HIV oral self-test is too difficult to use. (reverse coded)	

Methods

Independent Variables: Individual Factors

- **HIV testing stigma**

Example: “Getting tested for HIV would make me feel ashamed.”
(Fortenberry et al., 2002: $\alpha = .71$)

- **HIV health literacy**

Example: “If a person gets infected with HIV, how long does it usually take before an HIV test would show he was infected?”

- **Kit cost**

(e.g. reservation price; Wang et al., 2007)

- **Educational attainment**

- **Sexual risk**

Methods

Independent Variables: *Trial-Related Factors*

- **Procedural knowledge**

Example: “What is the shortest period of time you need to wait between putting the test stick in the tube and taking it out to read the result?”

- **Performance fidelity**

Example: “R placed specimen stick correctly into the test tube.”

- **Perceptions of training video**

“The video was important in helping me understand how to use the kit.”

“The video made me think about trying an oral HIV self-test sometime soon”

Results

Explanatory Correlates of OSB (Mean: 3.82)

<i>Independent variables</i>	<i>Bivariate p-value</i>	<i>Regr. B (SE)</i>
Social stigma	< .001	-.17 (.05)***
HIV health literacy	ns	--
Education	ns	--
Kit cost	< .002	.09 (.04)**
Sexual risk	< .05	-.02 (.05)
Procedural knowledge	ns	--
Procedural fidelity	ns	--
Video important in understanding how to use kit	< .02	.16 (.10)
Video influenced intention to use test	< .001	.21 (.05)***

***p<.001; **p<.01

Discussion

Social stigma

- More positive OSB associated with lower levels of stigma
- Stigma may inhibit men's ability to have a positive response to SIT, or prevent processing of HIV- or sexuality-related information

How do we change stigma?

How do we provide AAMSM with a buffer against stigma, when its effects are often severe?

Discussion

Kit cost

- Cost acts as a de-motivator to adopting Oral-SIT
- AAMSM in sample were young; many unemployed or in low-level jobs

Discussion

Kit cost

- Need for broad-scale dissemination efforts
- Example: Departments of Public Health
 - Doesn't require trained staff
 - Purchase kits below retail cost (\$25 v. \$40)
 - Increased efficiency

Discussion

Influence of training video on Oral-SIT intention

- More positive OSB among men who perceived the video as influencing their intention to adopt
- Video acted to enhance motivation to adopt Oral-SIT
 - Portrays test as easy to use
 - Provides relatable character, situation
 - Demonstrates privacy, convenience

Discussion

Implications for Diffusion Theory

- Trialability is a critical factor in the decision to adopt an innovation. Individual level factors can influence attitude formation following an initial trial.
- Improved dissemination of Oral-SIT can facilitate adoption, early identification of HIV-positive individuals, and linkage to care.

References

- 1 Estem, K. S., Catania, J., & Klausner, J. D. (2016). HIV self-testing: a review of current implementation and fidelity. *Current HIV/AIDS Reports*, 13(2), 107-115.
- 2 Kulkarni SP et al. Clinical uncertainties, health service challenges, and ethical complexities of HIV “test-and-treat”: A systematic review. *American Journal of Public Health*. 2013;103(6):e14–23.
- 3 St. Lawrence, J. S., Kelly, J. A., Dickson-Gomez, J., Owczarzak, J., Amirkhanian, Y. A., & Sitzler, C. (2015). Attitudes toward HIV voluntary counseling and testing (VCT) among African American men who have sex with men: Concerns underlying reluctance to test. *AIDS Education and Prevention*, 27(3), 195-211.
- 4 Figueroa, C., Johnson, C., Verster, A., & Baggaley, R. (2015). Attitudes and acceptability on HIV self-testing among key populations: a literature review. *AIDS and Behavior*, 19(11), 1949-1965.
- 5 Flowers, P., Riddell, J., Park, C., Ahmed, B., Young, I., Frankis, J., ... & McDaid, L. M. (2017). Preparedness for use of the rapid result HIV self-test by gay men and other men who have sex with men (MSM): a mixed methods exploratory study among MSM and those involved in HIV prevention and care. *HIV medicine*, 18(4), 245-255.
- 6 Jamil, M. S., Guy, R. J., Bavinton, B. R., Fairley, C. K., Grulich, A. E., Holt, M., ... & Keen, P. (2017). HIV testing self-efficacy is associated with higher HIV testing frequency and perceived likelihood to self-test among gay and bisexual men. *Sexual health*, 14(2), 170-178.
- 7 Johnson, C. C., Kennedy, C., Fonner, V., Siegfried, N., Figueroa, C., Dalal, S., ... & Baggaley, R. (2017). Examining the effects of HIV self-testing compared to standard HIV testing services: a systematic review and meta-analysis. *Journal of the International AIDS Society*, 20(1), 21594.
- 8 Pai NP, Sharma J, Shivkumar S, Pillay S, Vadnais C, Joseph L, et al. Supervised and unsupervised self-testing for HIV in high-and low risk populations: a systematic review. *PLoS Med*. 2013;10(4): e1001414.
- 9 Frye, V., Wilton, L., Hirshfield, S., Chiasson, M. A., Usher, D., Lucy, D., ... & All About Me Study Team. (2015). “Just Because It’s Out There, People Aren’t Going to Use It.” HIV self-testing among young, black MSM, and transgender women. *AIDS Patient Care and STDs*, 29(11), 617-624.
- 10 Witzel, T. C., Weatherburn, P., Burns, F. M., Johnson, C. C., Figueroa, C., & Rodger, A. J. (2017). Consolidating emerging evidence surrounding HIVST and HIVSS: a rapid systematic mapping protocol. *Systematic reviews*, 6(1), 72.
- 11 Merchant, R. C., Clark, M. A., Liu, T., Rosenberger, J. G., Romanoff, J., Bauermeister, J., & Mayer, K. H. (2017). Preferences for oral fluid rapid HIV self-testing among social media-using young black, Hispanic, and white men-who-have-sex-with-men (YMSM): implications for future interventions. *Public health*, 145, 7-19.
- 12 Rogers, E. M. (2003). *Diffusion of Innovations* (5th ed.). New York: Free Press.
- 13 Katz, D. A., Golden, M., Hughes, J., Farquhar, C., & Stekler, J. (2012, March). Acceptability and ease of use of home self-testing for HIV among men who have sex with men. In *19th Conference on Retroviruses and Opportunistic Infections*. Seattle, WA.
- 14 Bilardi, J. E., Walker, S., Read, T., Prestage, G., Chen, M. Y., Guy, R., ... & Fairley, C. K. (2013). Gay and bisexual men’s views on rapid self-testing for HIV. *AIDS and Behavior*, 17(6), 2093-2099.
- 15 Koblin, B. A., Nandi, V., Hirshfield, S., Chiasson, M. A., Hoover, D. R., Wilton, L., ... & Frye, V. (2017). Informing the development of a mobile phone HIV testing intervention: intentions to use specific HIV testing approaches among young black transgender women and men who have sex with men. *JMIR public health and surveillance*, 3(3).
- 16 Fortenberry, J. D., McFarlane, M., Bleakley, A., Bull, S., Fishbein, M., Grimley, D. M., ... & Stoner, B. P. (2002). Relationships of stigma and shame to gonorrhoea and HIV screening. *American journal of public health*, 92(3), 378-381.
- 17 Peralta L et al. Barriers and facilitators to adolescent HIV testing. *AIDS Patient Care STDS*. 2007;21(6):400–8.

Questions?

Thank you!

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