

The Critical Influence of Daily Experiences of Internalized HIV Stigma on Medication Non-Adherence for HIV-Positive Gay and Bisexual Men

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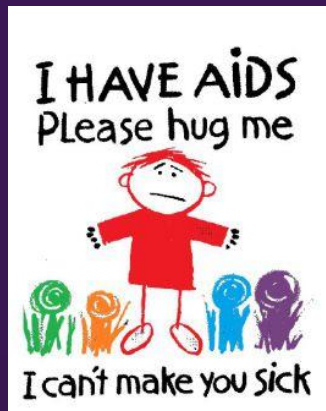
May 11, 2016

Presented at the Annual Meeting of the International Association of Providers in AIDS Care
Fort Lauderdale, FL



Types of HIV Stigma

- Stigma = an attribute that is *socially* devalued or discredited
- HIV stigma can come in many varieties
 - Enacted – for example, experiencing discrimination or being treated unfairly
 - Anticipated – for example, fears regarding disclosure or rejection sensitivity
 - Internalized – for example, shame or negative self-image



Measuring Stigma

- Despite its recognized importance, domestic research on HIV stigma is lacking
- One of its three forms is often examined in isolation
- HIV stigma is often examined in relation to behavioral and biological outcomes as a *trait*, but it might fluctuate over time



Aim

- Examine the association between individual-level (i.e., dispositional) and situational-level (i.e., fluctuating) HIV stigma and HIV medication non-adherence
 - Do we see associations for individual-level, situational-level, or both?
 - Do we see associations for anticipated/social stigma! Internalized stigma, or both?



Method

day2day: A mobile health study



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Funded by the National Institute on Drug Abuse: K01-DA039030

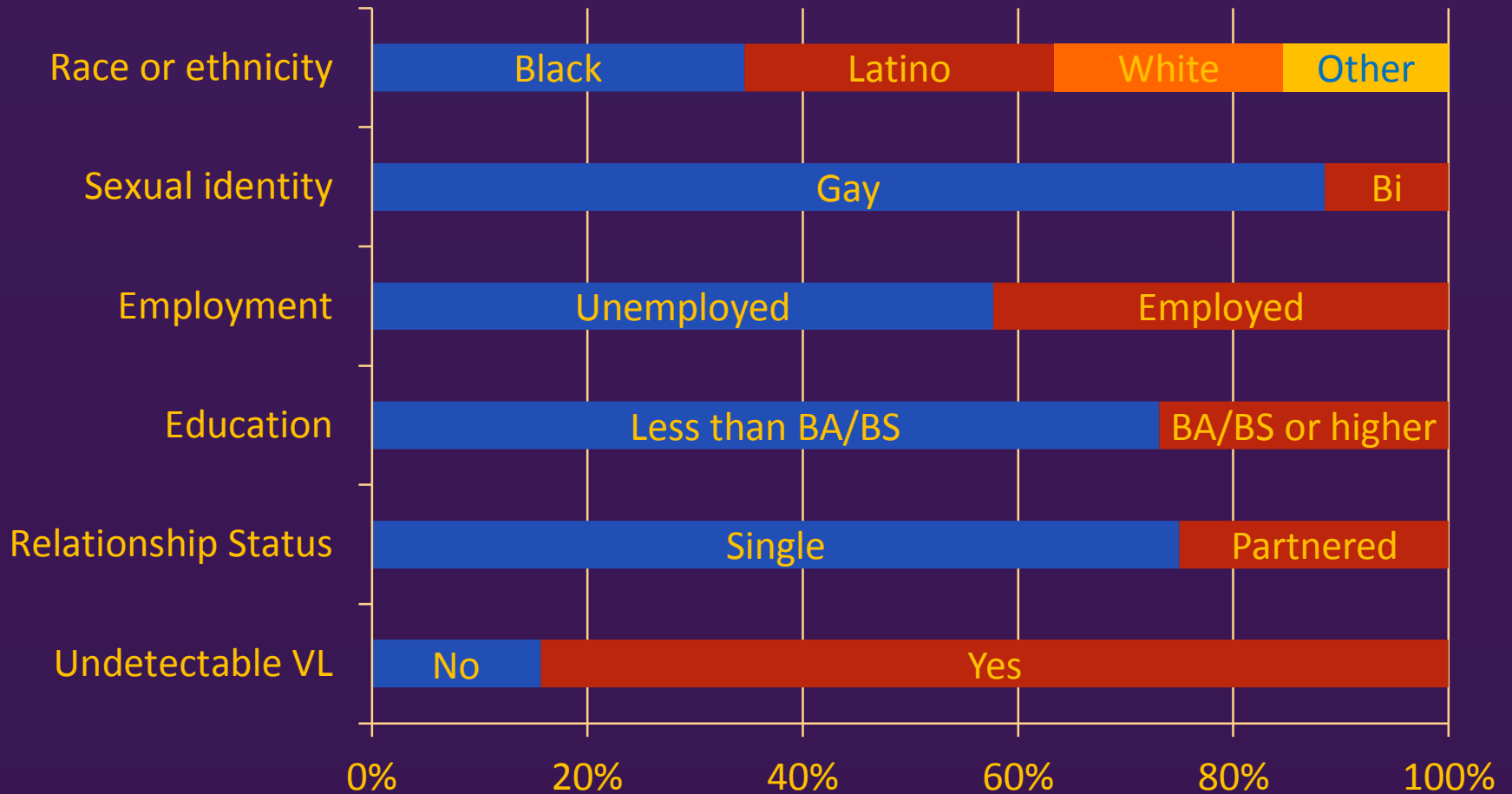
Participants & Procedures

- HIV-positive gay and bisexual men in NYC
 - Recent drug use (2+ days of club drug use in 30 days)
 - Recent transmission risk behavior (1+ act of CAS with a negative/unknown partner – excluding MPs on PrEP)
 - Prescribed ART
 - Daily access to the internet via smartphone
- Multicomponent study
 - Online CASI measure from home
 - Computerized timeline follow-back (TLFB)
 - Neurocognitive testing
 - 21-day twice-daily EMA
 - Optional Substudy: 2 extra EMA surveys, 10 days of twice-daily cortisol, in-office blood draw
 - Brief follow-up CASI

Participants & Procedures

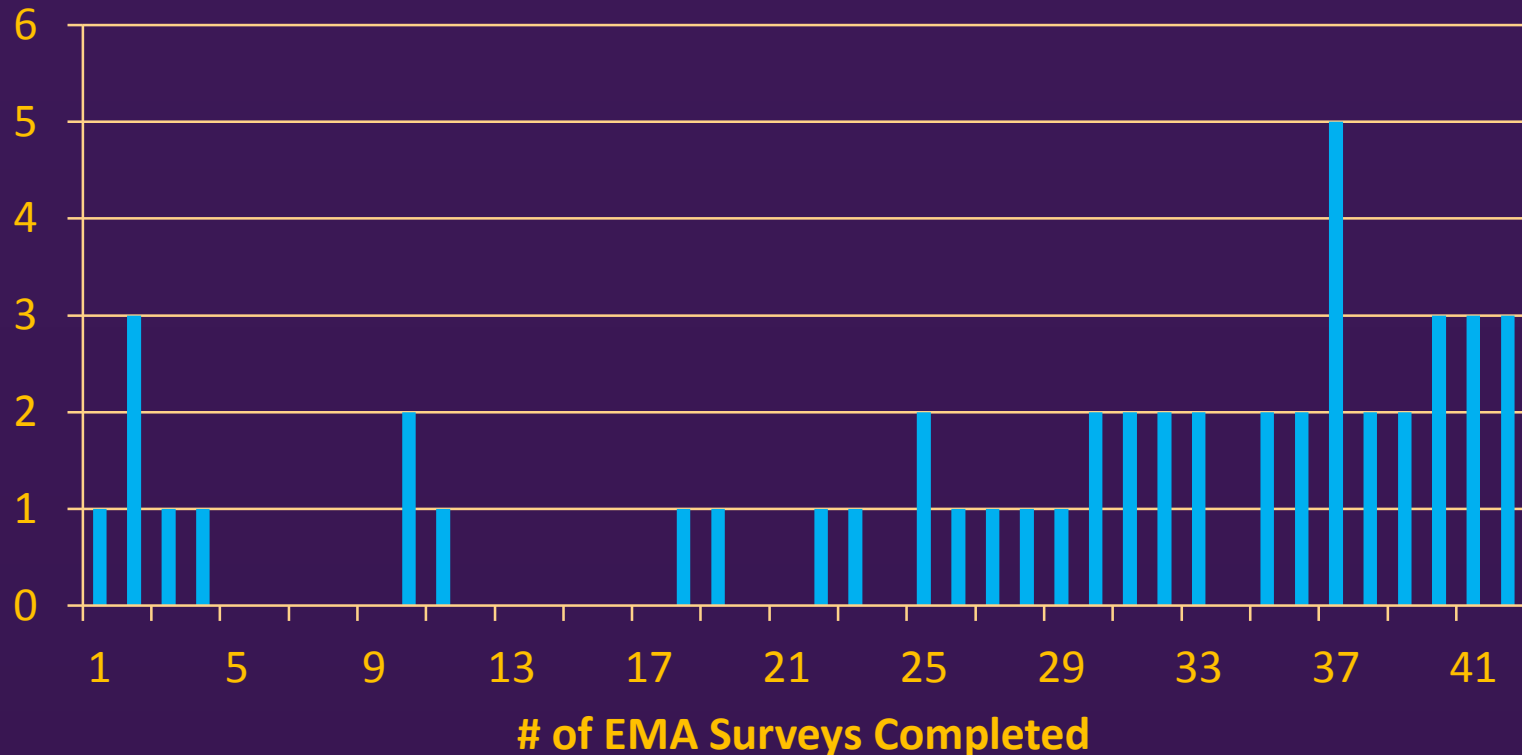
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Demographics ($n = 52$)



EMA Completion ($N = 52$)

- $M = 28.9$ surveys, $Mdn = 33.0$
- 727 events for these analyses



EMA Measures – HIV Stigma

- Adapted from several published measures (HIV Stigma Scale, HIV/AIDS Stress Scale, Impact of HIV on Self-Concept Scale)
- Anticipated/Social HIV Stigma (4 items)
 - “I’ve wanted to hide my status,” “I’ve been worried people would judge me if they knew my status”
 - 1 = not at all, 4 = completely
- Internalized HIV Stigma (5 items)
 - “I’ve been feeling guilty because of my HIV status,” “I’ve been feeling emotionally upset or overwhelmed by my status”
 - 1 = not at all, 4 = completely
- Disaggregated into situational (person-centered scores) and individual (grand-mean centered) averages

EMA Measures - Adherence

- ARV non-adherence for each day was assessed in the evening for each drug and dosing time and aggregated into any missed ARVs that day

Did you take...	Yes	No
Med 1 AM	1	0
Med 2 AM	1	0
Med 3 AM	1	0
Med 4 AM	1	0
Med 1 PM	1	0
Med 2 PM	1	0
Med 3 PM	1	0
Med 4 PM	1	0

Statistical Analyses

- Logistic mixed model
- AR(1) covariance structure for repeated measures
- Random intercept estimated
- Model adjusted for:
 - Level 2: Black race, years living with HIV, age, relationship status
 - Level 1: Day of EMA cycle

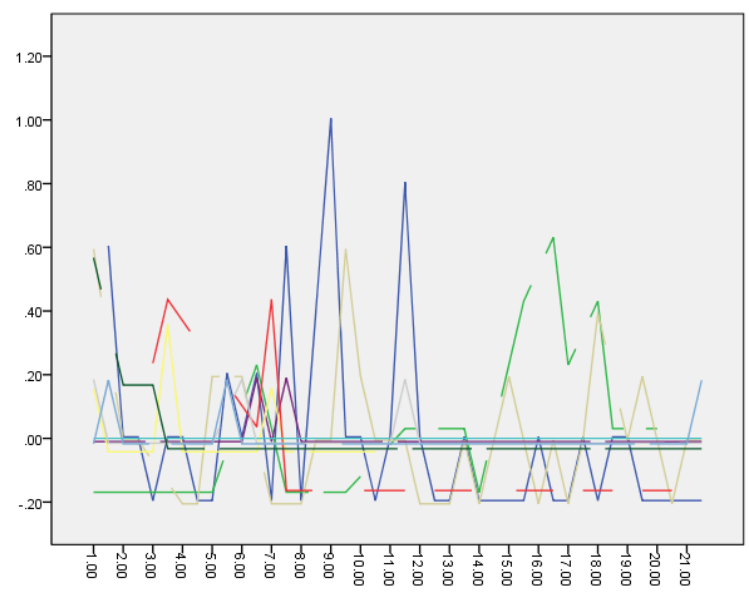
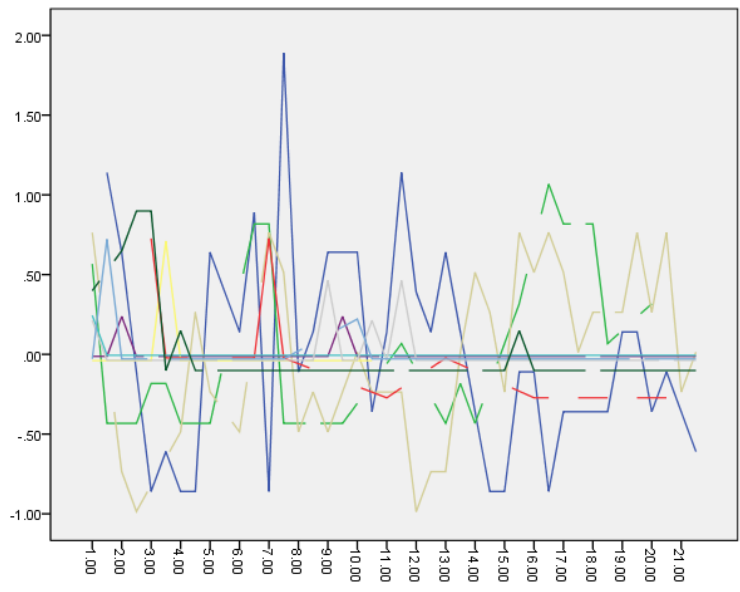
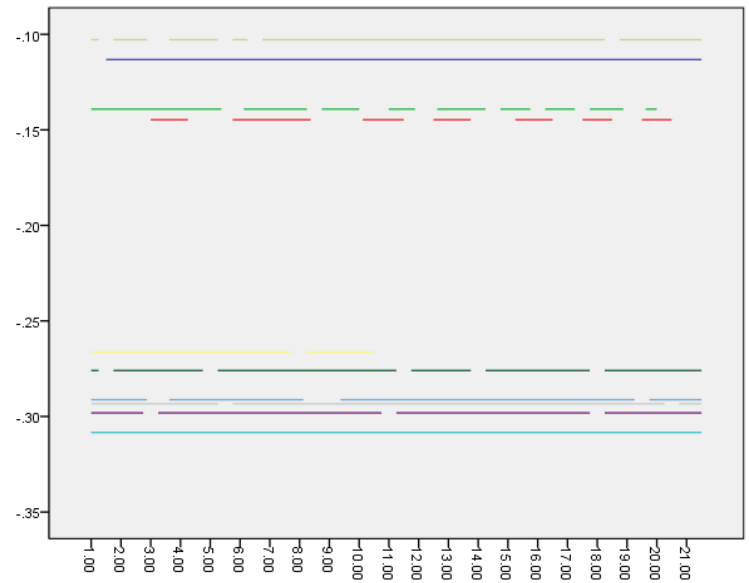
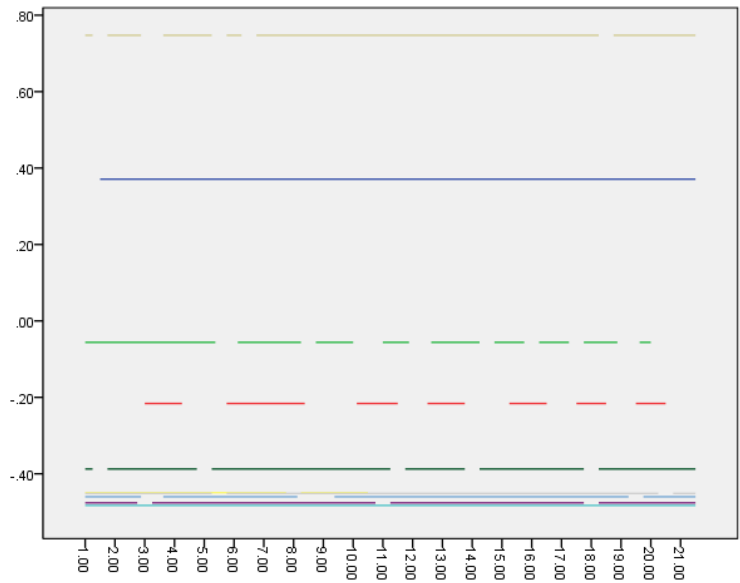
Results: How is HIV Stigma associated with daily non-adherence?

Anticipated/Social HIV Stigma

Internalized HIV Stigma

Between-Person

Within-Person



Stigma and Adherence

	Medication Non-Adherence	
	B	95%CI
<u>Level 2: Individual Level</u>		
Anticipated HIV Stigma	-1.80	-4.68, 1.09
Internalized HIV Stigma	2.86	-0.76, 6.49
<u>Level 1: Situational Level</u>		
Anticipated HIV Stigma	-0.60	-1.42, 0.21
Internalized HIV Stigma	1.07*	0.09, 2.05

Note: Number of events = 727

Discussion

Summary of findings

- Variation in both anticipated/social and internalized HIV stigma is primarily *between* rather than *within* persons over the course of 21 days (20% is due to situational fluctuation)
- Despite this, *situational* variability in internalized HIV stigma the only significant predictor of ART non-adherence
 - Each 1-unit increase above a person's average level was associated with a 7% increase in the odds of non-adherence that day
- Individual-level internalized HIV stigma as well as individual- and situational-level anticipated/social stigma were not associated

Limitations

- Small convenience sample of drug-using GBM who engaged in TRB
- Less power to detect between-person than within-person effects (though limited power for both)
- Unable to distinguish directionality (could internalized stigma result from non-adherence?)
- Did not consider the role of other forms of stigma



Implications & Conclusions

- Internalized stigma appears to be a critical variable to consider in models of adherence for HIV+ individuals
 - More research is needed to refine the measurement of daily stigma and distinguish situational fluctuations from more individual-level dispositions/tendencies
- HIV stigma represents a key target for intervention
 - Given the situational fluctuations are associated with adherence, a mobile stress management intervention for just-in-time delivery may be warranted

Acknowledgements

- The entire team of CHEST staff, interns, volunteers, and recruiters
- My team of mentors for my K01
- National Institute on Drug Abuse and PSC-CUNY
 - Developing a mobile emotion regulation intervention for HIV-positive men (K01-DA039030; PI: Rendina; PO: Will Aklin)
- Our participants who volunteered their time

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Thank you!

For further questions or a copy of these slides, please email me:

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