Stigma toward Anal Sexuality is Associated with Decreased Engagement in HIV Prevention among Cisgender MSM

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BACKGROUND

We sought to quantify the effects of a specific social factor, *stigma toward anal sex*, on *engagement in HIV interventions* among cisgender MSM living in the U.S.

- HIV incidence remains disproportionately high among men who have sex with men (MSM), and their engagement in efficacious biomedical and behavioral interventions remains low
- Social factors, including stigma toward sexual behavior, likely hinder engagement in HIV interventions
- We hypothesized (Figure 1) that elevated *stigma* would be associated with a direct effect of lower *engagement*, mediated by an indirect effect of elevated *anal sex concerns*, which we operationalized as interest in answers to frequently asked questions (FAQs) about anal sexuality

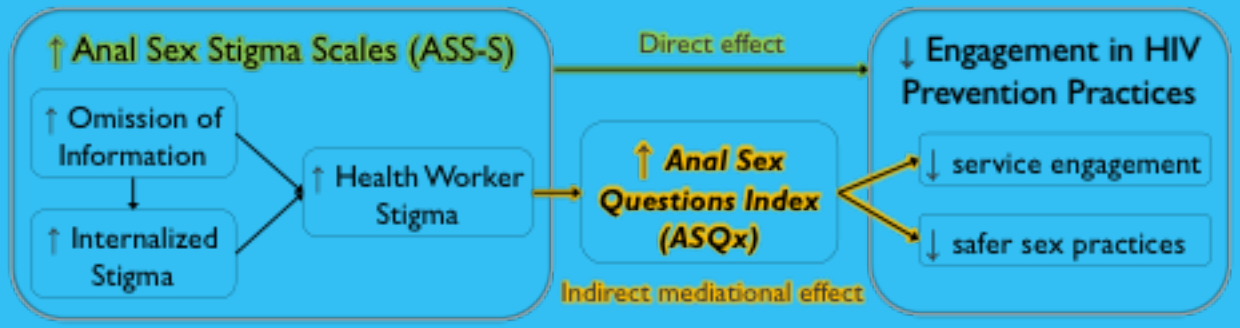


Figure 1. Conceptual Model of Effects of Anal Sex Stigma on HIV Prevention Practices

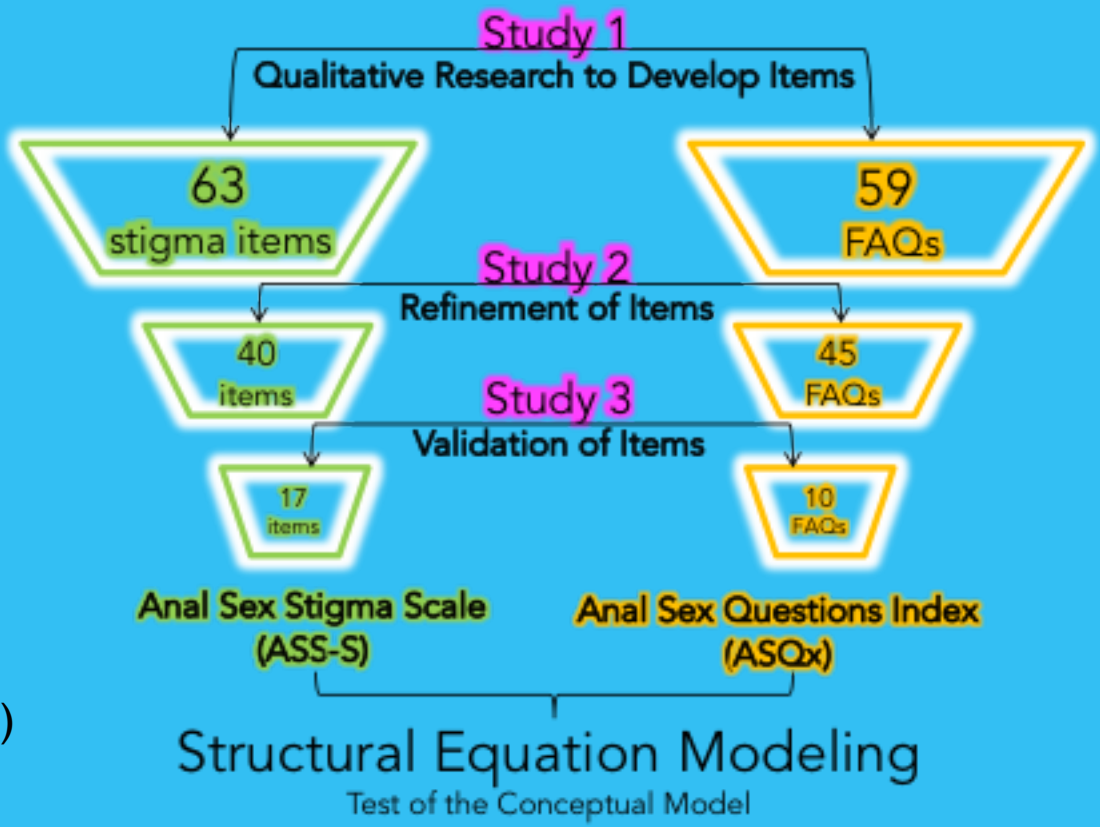
METHODS

Study 1: We developed two new quantitative measures of anal sexuality, based on qualitative interviews with key informants (*N* = 10) and cisgender MSM (*N* = 25)

- The ***Anal Sex Stigma Scale*** (*ASS-S*)
- The ***Anal Sex Questions Index*** (*ASQx*)

Study 2: We refined these measures in a national online sample of 218 cisgender MSM, using scale development criteria

Study 3: We then validated each measure in another national online sample comprising sexually active MSM (*N* = 1263) and conducted structural equation modeling to test their relations to HIV prevention practices (see Figure 1)



RESULTS

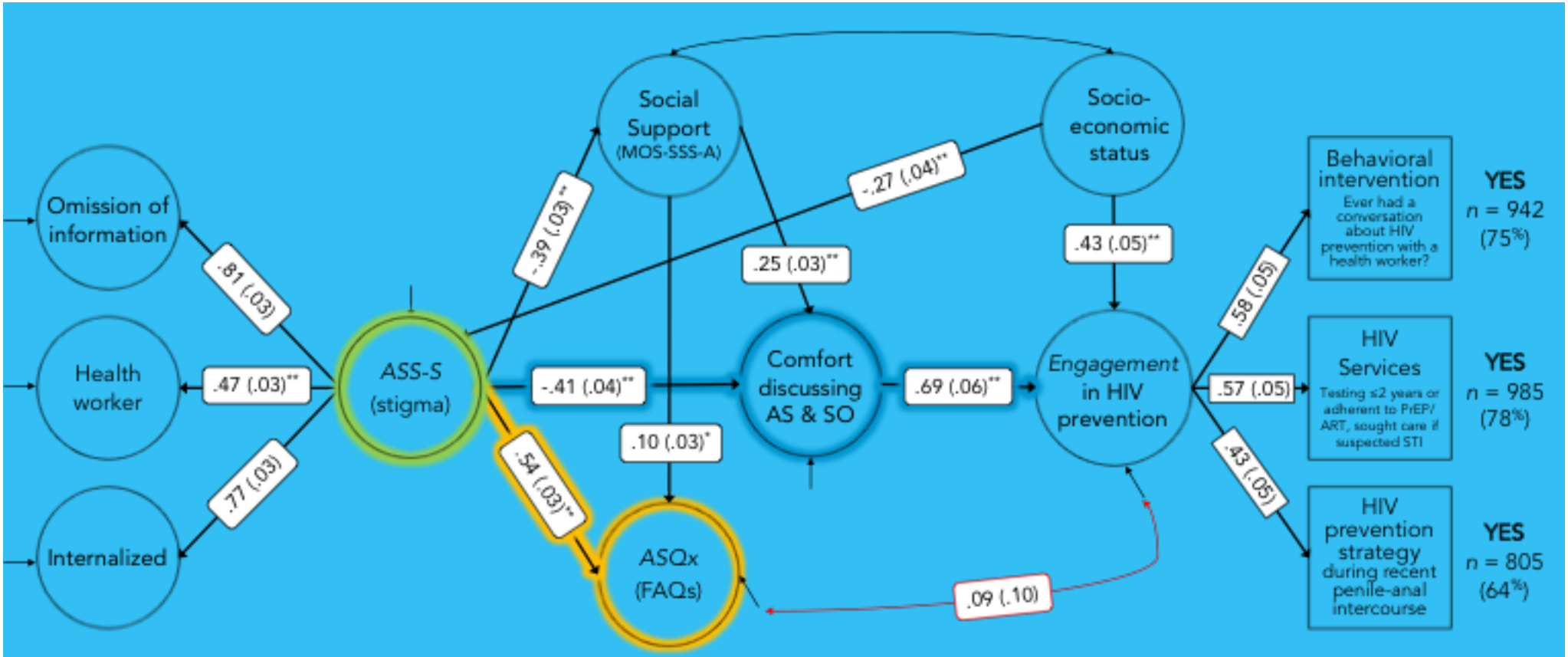
The final sample comprised cisgender MSM aged 18 to 72 years from 47 states, the District of Columbia and Puerto Rico: 47% men of color; 14% living with HIV; 28% prescribed PrEP; and 36% reporting no consistent HIV prevention strategy during recent penile-anal intercourse

- The *ASS-S* comprised 17 items, including aspects of omission of information, health worker stigma, and internalized anal stigma (Table 1)
- The ASQx comprised 45 questions and structural equation modeling included the 10 most variable questions (Table 2)

The final model (Table 3 and Figure 2) accounted for 75% of the variance in *engagement*, had good fit (X^2/df = 2.7, RMSEA = .037, CFI = .99, TFI = .99), and found evidence for effects of all factors ($p < .005$)

- We did not find evidence of mediation by *ASQx*, but did find evidence that *ASS-S* is associated with less *engagement* in HIV prevention (Table 3: β = -.28, $p < .001$)
- The association between ASS-S and engagement was wholly mediated by men's *comfort* talking about sexual orientation and anal sex practices with health workers (Figure 2: β = -.41; β = .69; $p < .001$), controlling for *socioeconomic status* and *social support* specific to anal sex

FIGURE 2



Structural covariance with standardized beta coefficients of *engagement* in HIV services and safer sex predicted by anal sex *stigma* (*ASS-S*), mediated by *comfort* talking about sexual orientation and specific anal sex practices with a health worker, moderated by informational and emotional *social support* specific to anal sexuality (adaptation of subscale from the MOS-SSS), controlling for interest in answers to frequently asked questions about anal sexuality (*ASQx*) and *socioeconomic status* (age, income, education, medical coverage, and Black/African-American identification). * $p < .005$; ** $p < .001$.

TABLE I

Exploratory factor analysis of anal sex stigma items (*n* = 817, randomized from Study 3)

Factors:	Health Worker	Internalized	Omission
% variance explained	21.1	9.9	5.4
Cronbach's α	.79	.72	.73
Item	.79	.72	.73
Health workers will try to scare me about anal sex. (A)	.78		
Health workers would treat me badly if they knew the ways I have anal sex. (A)	.75		
If they knew the ways I have anal sex, most health workers would shame or lecture me to stop. (A)	.66		
I've been shamed or lectured about anal sex by a health worker. (E)	.64		
Health workers have ignored my concerns about anal health. (E)	.46		
I hate myself for feeling the way I do about anal sex. (I)		.75	
I may never let go of the shame I feel about anal sex. (I)		.68	
When I have anal sex, I feel like I've done something unhealthy. (I)		.58	
I feel like I don't know how to have anal sex properly. (I)		.44	
I often feel like nobody else shares my same issues about anal sex. (I)		.44	
In my mind, anal sex is always dangerous, no matter how safe you think you are. (I)		.42	
Most guys don't understand how to ease into anal sex. (A)			.67
Most guys don't know how to prepare themselves for bottoming. (A)			.58
In my experience, people usually don't like to talk very openly about anal sex. (E)			.55
Most guys I've had sex with really didn't know how to have anal sex properly. (E)			.54
Even if someone brought it up, most guys would hide their true feelings about anal sex. (A)			.52
Experience tells me most people think anal sex is disgusting, even if they've never said it aloud. (E)			.41

Note: Letter in parentheses indicates *a priori* hypothesized subscale (A=anticipated, I=internalized, E=experienced); total Cronbach's α = .80.

TABLE 2

Means and standard deviations for the 10 most variable *ASQx* items (*N* = 1263 MSM)

Item	*M* (*SD*)
Why does anal sex feel different for me than it used to feel? (01)	1.65 (1.13)
How many other guys have problems with anal sex like the problems I have? (09)	1.74 (1.13)
How many other guys feel pain from anal sex like I do? (10)	1.59 (1.15)
Why do I desire anal sex? (17)	1.66 (1.20)
Why can't I mentally relax enough to enjoy anal sex? (18)	1.53 (1.20)
Can a health worker tell from a physical exam that someone has had anal sex? (35)	1.56 (1.18)
How much anal sex is too much? (42)	1.88 (1.12)
Will relaxing during anal sex cause more damage? (41)	1.89 (1.09)
Is bleeding normal? (39)	1.90 (1.06)
What is a good recipe for homemade lubrication for anal sex? (43)	1.75 (1.22)

TABLE 3

Results of Structural Equation Modeling predicting *engagement* in HIV treatment and prevention practices among MSM who reported recent penile-anal intercourse (*N* = 1263)

	β (standardized)						
Model Variables	Stigma (*ASS-S*)	Concerns (*ASQx*)	Comfort	Social Support	SES	SE	R^2
Total Effects on							
Stigma	—			-.39**	-.27**	.03	.25**
Concerns	.54**	—		-.11**		.03	.26**
Comfort	-.41**		—	.41**		.03	.32**
Social Support				—		—	—
SES					—	—	—
Engagement	-.28**		.69**	.28**	.51**	.09	.75**

* $p < .005$, ** $p < .001$; model fit indices: $X^2(932) = 2542.69$, $p < .0001$, $X^2/df = 2.7$, RMSEA = .037, 90% CI: .035 - .039, probability of RMSEA < .05 = 1, CFI = .99, TFI = .99, WRMR = 1.63.

DISCUSSION

We found evidence that MSM reluctance to discuss anal sexuality with health workers may impede their engagement in HIV services and safer anal sex practices.

The ways MSM cope with stigma and questions specific to anal sex may not be readily known or easy to disclose in healthcare settings. Interventions that bolster men's comfort discussing anal sexuality may insulate some men against the concealment effects of anal sex stigma, and thereby improve engagement in existing HIV interventions.

We did not find evidence of mediation by the *Anal Sex Questions Index (ASQx)*, but responding to questions about anal sex that interest cisgender MSM may function as social support and thereby foster engagement.

This contributes to collective efforts to better understand social factors influencing the HIV epidemic and, ultimately, may help focus attention on urgently needed structural and social interventions to end HIV disparities among MSM.

ACKNOWLEDGEMENTS

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