Readiness for HIV Testing among Midlife Women

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Background

Midlife and older women have the lowest levels of HIV testing and are more likely to be diagnosed late and to die earlier from HIV (CDC, 2013). Among women in the US with new HIV infections, an estimated 38% were age 40 or older (24% ages 40-49 and 14% age 50 or older) with 79% of new infections attributed to heterosexual transmission (Prejean et al., 2011). Despite this, women past reproductive years have seldom been included in studies of HIV testing.

The purpose of this study was to identify predictors of the readiness of midlife women to have an HIV test to inform interventions to increase the rates of HIV testing and early treatment among this population.

Most studies of HIV testing use a single dependent variable (DV) such as intention to test, interest in testing, willingness to accept a test if offered, or report of having had an HIV test. Testing multiple dependent variables has been suggested as a way to "increase the methodological and conceptual strengths of studies" of health behavior (Noar & Zimmerman, 2005, p. 284).

Methods

This cross-sectional study used a survey mailed to a sample of 1,500 women ages 50 to 59 randomly selected from the 2008 resident census from 10 Massachusetts (MA) cities with high prevalence of HIV among women and/or high proportion of Black or Hispanic women ages 40-49.

The survey used a newly developed 50-item Health Belief and HIV Testing (HBHT) instrument based on the Health Belief Model (HBM). Development and psychometric testing of the instrument have been reported previously (Hamilton, 2012; Hamilton & Mawn, 2009). This poster presents results of an analysis of data from four measures of readiness to have an HIV test, sociodemographic data, and HIV testing history.

Measures of Readiness for HIV Testing

Readiness for HIV testing was measured by four survey items using a Likert scale with a 5-point response set (very likely, likely, neither likely nor unlikely, unlikely, very unlikely):

1.If I had the opportunity to have a screening test for HIV today, I would have the test today. (***Opportunity***)
2.If I had a routine visit to my primary care provider (doctor, nurse practitioner) today, and he or she recommended I have a screening test for HIV today, I would have the test today. (***PCP recommends***)
3.If I were starting a new sexual relationship today, I would plan to have an HIV test before having sex without a condom. (***New partner***)
4.I intend to have an HIV test sometime within the next 12 months. (***Intend***)

Sample

Sample is 369 women, mean age 54.4 (SD 2.84)
Response rate = 24.6%

Table 1 *Sample Characteristics*

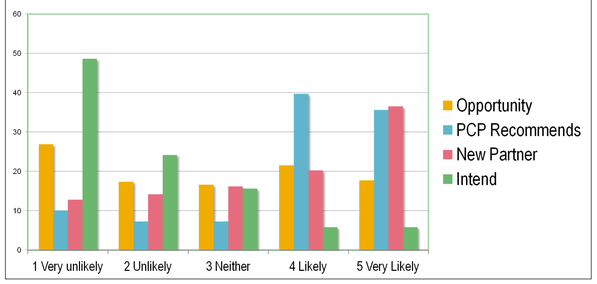
Race/ethnicity	n	%	Marital status	n	%
White, non-Hispanic	283	77	Married	184	50
Black, non-Hispanic	29	8	Living with partner	33	9
Hispanic	39	11	Divorced or separated	85	23
Asian/Pacific Islander	5	1	Widowed	16	4
Other	12	3	Single, never married	49	13
Education	**n**	**%**	**Household income**	**n**	**%**
Ninth grade or less	12	3	Less than $15,000	47	13
Some high school	11	3	$15,000 to 29,999	45	13
H.S. diploma or GED	60	16	$30,000 to 49,999	55	16
Some college	63	17	$50,000 to 74,999	73	21
Associate's degree	53	14	$75,000 to 99,999	52	15
Bachelor's degree	87	24	$100,000 or more	82	23
Master's or higher	82	22			

Nativity:
81% born in US, 5% Puerto Rico, 3% Haiti and DR, and 4% Europe
Menopausal status:
71% report 12 or more months since last menstrual period.
Sexual history:
Majority report being sexually active (59%), heterosexual (90%), and having one sexual partner (53%) or none (41%) in the past 12 months. Most (91%) reported no condom use.
HIV testing history:
44% report prior HIV testing, 15% had tested 2 or more times. 6% tested in past 12 months. Of 172 women who had never tested, only 11 (6%) reported having ever been offered an HIV test.
Health care access:
97% have health insurance, 95% have a PCP, 89% saw PCP within last 12 months.

Results

Three of four women (75%) were likely (40%) or very likely (35%) to have an HIV test if one were recommended by their PCP compared to 38% likely or very likely to test given an opportunity, 57% to test before sex with a new partner, and 12% to intend to have an HIV test in the next 12 months.

Chart 1 *Distribution of Responses to Items Measuring Readiness to Have an HIV Test*



Results

Women were significantly more likely to have an HIV test if one were recommended by their PCP (M = 3.83, SD = 1.27) than if they had the opportunity to have an HIV test (M = 2.86, SD = 1.47), t = 13.74, p < .001, or than intend to have an HIV test in the next 12 months (M = 1.96, SD = 1.18), t = 24.76, p < .001.

Except when recommended by a PCP, readiness to have an HIV test varied significantly based on income, education, race/ethnicity, marital status, and prior HIV testing (Table 2).

Table 2: *Variance in Readiness to Have an HIV Test Based on Sociodemographic Data and Prior HIV Testing*

Variable	Opportunity	PCP Recommends	New Partner	Intend
Never tested[a]	-4.23***	-1.83	-2.01*	-4.33***
Income[b]	-.29***	-.02	-.11*	-.31***
Education[b]	-.23***	-.02	-.10	-.18***
Race/ethnicity[c]	23.38***	5.58	15.47**	25.21***
Marital status[c]	13.70**	3.28	2.14	36.04***
Private health insurance[a]	-2.62**	-0.45	-2.58**	-3.37***
Foreign-born[a]	2.70**	0.50	1.99*	2.91**

[a]Mann-Whitney U test (z score)
[b]Spearman's correlation coefficient *rho*
[c]Kruskal Wallis χ^2
p-value *<.05, **<.01, ***<.001

Asked if they were offered an HIV test or if they intend to test, women were significantly less likely to indicate they would have an HIV test if they had never tested, had higher income or education, had private health insurance, or were born in the US. Women who were not married or who are Black or Hispanic were significantly more likely to have an HIV test than married or White women (Table 2).

Discussion

Women who might not otherwise seek or accept an HIV test appear to be ready to have an HIV test if one is recommended by their PCP during a routine visit.

Each DV appears to measure a different dimension of the construct readiness to have an HIV test. Using multiple indicators helped to demonstrate the importance of a provider recommendation that would not be as compelling without the contrast to a similarly framed statement of opportunity to test.

Limitations

This research was conducted in MA, a state with high rates of health insurance coverage and primary care access and findings may not be applicable to midlife women in states where access to care is more limited. Although representative of midlife women in MA, the sample is largely White, middle income, and well educated.

Conclusions & Recommendations

Readiness to have an HIV test among midlife women appears to be at least partly situational or contextual, with 75% of women likely or very likely to have an HIV test is one were recommended by their PCP, with no differences based on income, education, race/ethnicity, marital status, nativity, or having ever had an HIV test.

The rates of HIV testing among midlife women and other population groups at low perceived risk for HIV may increase if PCPs actively recommend, not just offer, routine HIV testing to all patients.

Future research of HIV testing may benefit from using multiple dependent variables (Noar & Zimmerman, 2005). Multiple outcome indicators may provide a more complete and contextual understanding of readiness to participate in health screening.

Literature Cited

Centers for Disease Control and Prevention. (2013). *HIV surveillance report: Diagnoses of HIV infection in the United States and dependent areas, 2011*, vol. 23.
Hamilton, S.L., & Mawn, B. (2009, March 20). *Health Belief and HIV Testing Scale: Instrument development and psychometric testing.* Poster presented at Eastern Nursing Research Society Annual Scientific Sessions, Boston, MA.
Hamilton, S.L. (2012). *Predictors of readiness for HIV testing among midlife women* (Unpublished doctoral dissertation). University of Massachusetts Lowell, Lowell, MA.
Noar, S.M., & Zimmerman, R.S. (2005). Health behavior theory and cumulative knowledge regarding health behaviors: Are we moving in the right direction? *Health Education Research, 20*(3), 275-290.
Prejean, J., Song, R., Hernandez, A., Ziebell, R., Green, T., Walker, F.,… Hall, H.I. (2011). Estimated HIV incidence in the United States, 2006-2009. *PlosOne, 6*(8),e17502.

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