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Receipt of Cervical Cancer Screening in Female Veterans: Impact of Posttraumatic Stress Disorder and Depression

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Abstract

Purpose—We evaluated receipt of cervical cancer screening in a national sample of 34,213 women veterans using Veteran Health Administration (VHA) facilities between 2003 and 2007

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and diagnosed with either: 1) posttraumatic stress disorder (PTSD); 2) depression; or 3) no psychiatric illness.

Methods—Our study featured a cross sectional design in which logistic regression analyses compared receipt of recommended cervical cancer screening for all three diagnostic groups.

Results—Cervical cancer screening rates varied minimally by diagnostic group: 77% of women with PTSD vs. 75% with depression vs. 75% without psychiatric illness were screened during the study observation period, $P < .001$. However, primary care use was associated with differential odds of screening in women with vs. without psychiatric illness (PTSD or depression), and findings held after even after adjustment for age, income and physical comorbidities (Wald Chi Square (2): 126.59, $P < .0001$). Specifically, among low users of primary care services, women PTSD or depression were more likely than those without psychiatric diagnoses to receive screening, but among high users of primary care services, they were less likely to receive screening.

Conclusions—Psychiatric illness (PTSD or depression) had little to no effect on receipt of cervical cancer screening. Our finding that high use of primary care services was not associated with comparable odds of screening in women with vs. without psychiatric illness suggests that providers caring for women with PTSD or depression and high use of primary care services should be especially attentive to their preventive health care needs.

Keywords

cervical cancer screening; PTSD; depression; women; veterans

INTRODUCTION AND BACKGROUND

Prior studies of the association between psychiatric illness and cervical cancer screening have largely focused on women diagnosed with depression, with an emphasis on their risk for decreased receipt of screening relative to non-depressed controls (Kaida, Colman & Janssen, 2008; Ludman, Ichikawa, Simon et al., 2010; Pirraglia, Sanyal, Singer et al., 2004; Vigod, Kurdyak, Stewart, et al, 2011). While this provides a strong and highly relevant foundation, additional work that determines if the risk for under-screening generalizes to women with other forms of psychiatric illness (cf., Yee, White, Lee, et al, 2011) is needed.

Little or no published research has examined receipt of cervical cancer screening in women with posttraumatic stress disorder (PTSD). This is surprising as there are several compelling reasons to suspect that women with PTSD might be at risk for under-screening. First, interpersonal violence exposure is a key precursor of PTSD in women (Fontana & Rosenheck, 1998; Frans, Rimmo, Aberg, et al., 2005). Both sexual and intimate partner violence have been empirically linked to decreased receipt of cervical cancer screening (Chronholm & Bowman, 2009; Farley, Golding, & Minkoff, 2002; Loxton, Powers, Schofield, Hussain & Hosking, 2009). Second, depression is commonly co-morbid with PTSD (Brady, Killeen, Brewerton et al., 2000; Kessler, Sonnega, Bromet, et al., 1995) and has also been associated with decreased receipt of cervical cancer screening (Kaida et al., 2008; Ludman et al, 2010; Vigod, et al. 2011). Third, psychiatric illness is associated with lower socio economic status (Hudson, 2005) and limited access to health care resources (Benjamin-Johnson, Moore, Gilmore & Watkins, 2009; Bradford, Kim, Braxtonet al., 2008; Sturm & Wells, 2000). Both factors can also impact receipt of cervical cancer screening (Ackerson & Gretebeck, 2007; Centers for Disease Control, 2012; Doescher & Jackson, 2009; Shi, Lebrun, Zhu & Tsai, 2011). Fourth, PTSD is associated with poor medical adherence (c.f., Whetten, Reif, Whetten & Murphy-McMillan, 2008). It is not known if women with PTSD are more likely to avoid cervical cancer screening than their peers

without psychiatric illness. However, their vulnerability to traumatic reactions to the pelvic examination may provide strong motivation to do so (Hilden, Sidenius, Langhoff-Roos, et al., 2003; Robohm & Buttenheim, 1996; Weitlauf, Finney, Ruzek, et al, 2008; Weitlauf, Frayne, Finney, et al., 2010). Finally, PTSD is often associated with a heavy burden of chronic medical illness (Del Gaizo, Elahi & Weaver, 2011; Frayne, Chiu, Iqbal, et al., 2011; Qureshi, Pyne, Magruder, et al., 2009) which can interfere with timely receipt of preventive health care.

Given the substantial prevalence (10% among civilian women; nearly 27% among women veterans) (Kessler, Sonnega, Bromet, et al., 1995; Kulka, Schlenger, Fairbankset et al., 1990) and broadly disabling impact of this disorder in women (American Psychiatric Association, 1994; Breslau, Davis, Peterson & Schultz, 1997; Dobie, Kivalan, Maynard, et al., 2004; Kessler, 2000), studies that explicitly addresses receipt of cervical cancer screening in women with PTSD are needed. Such work may be particularly valuable to health care settings (e.g., VHA) where the prevalence of PTSD is high and linked to interpersonal violence (Fontana & Rosenheck, 1998; Greenberg et al., 2011; Kimerling, Gima, Smith, et al., 2007; Kulka, Schlenger, Fairbanks, et al., 1990; Merrill, Newell, Thomsen, et al., 1999; Northeast Program Evaluation Center, 2011).

Toward that end, we examined the association between PTSD and cervical cancer screening in cross sectional study capitalizing on a large national sample of women veterans using VHA facilities for healthcare between 2003 and 2007. To evaluate our hypothesis that women with PTSD would be at highest risk for under-screening (no screening over three consecutive years), we compared their receipt of cervical cancer screening to that of VHA female patients with depression, and to VHA female patients with no psychiatric conditions. To evaluate our hypothesis that heavy use of primary care services could offset the effects of psychiatric illness (e,g, PTSD or depression) on screening, we evaluated the interaction of psychiatric diagnosis (PTSD or depression) and primary care use on women's receipt of cervical cancer screening during the study observation period.

METHODS

Study Overview and Data Sources

This study was approved by the [blinded by WHI editors] Institutional Review Board. We used the VHA National Patient Care Database to identify all women veterans who used VHA primary care and were between 18 and 61 years of age during our 12-month baseline period: October 2003-September 2004. Our study sample included three groups of women VHA patients: a) those diagnosed with PTSD (presence of other mental health co-morbidities was permitted); b) those diagnosed with depression, but not PTSD (hereafter referred to as "depression"); and c) those with no diagnosed psychiatric illness. The study design was cross sectional and receipt of any cervical cancer screening (screening at any point during study observation) was compared across groups. Access to the data was granted via a limited Health Insurance, Portability, Information and Accountability Act (HIPAA) waiver that allowed access to VHA's centralized patient medical record databases.

Study Sample

Figure 1 delineates the steps in sample creation. We identified 124,247 female veterans whose age was between 18 and 65 years prior to the last day of the study observation period and who had at least one primary care visit at one of the 91 (72%) VHA facilities (or VHA community based outpatient clinics affiliated with a VHA hospital or medical center) within the US at baseline and in each year of the study observation period. Women who were institutionalized for longer than 180 days during any year of the study, and those with

cognitive impairment or psychotic spectrum disorder were excluded as they were unlikely to have been reliably available for routine primary care services. Women who received care at VHA facilities where rates of screening were < 30% were also excluded as this raised suspicion about the reliable transmission of screening data to the central data repository. Application of these inclusion/exclusion criteria yielded a group of 34,123 eligible women who were diagnosed with a) PTSD; b) depression; or c) no psychiatric illnesses.

As substantial numbers of women (19,607) were excluded due to their affiliation with a VHA facility with low rates of cervical cancer screening, we took additional steps to ensure that this did not introduce bias into our sample selection. Formal comparisons of included vs. excluded women revealed no differences in age, physical co-morbidity or rates of PTSD, all *Ps* > .05. Compared to included women, those excluded had slightly lower mean household income (Mean income for included women = $46,970.00; SD = $14,970.00 vs. Mean income for excluded women = $46,719.00; SD = $13,770.00, *P* = .004). Rates of primary care use were slightly lower for included women (Mean = 4.0 visits per year; SD = 3.0) vs. in excluded women (Mean = 4.4 visits per year, SD = 3.2), *P* < .001.

Study Variables

Psychiatric status (independent variable)—Inclusion criteria specified that women veterans were diagnosed with either PTSD or depression, or had no medical record evidence of any psychiatric disorder. Using psychiatric diagnostic codes drawn from the International Statistical Classification of Diseases, 9th Revision, (ICD-9),(World Health Organization, 1977), we created a categorical variable that classified all women in our sample in one of those three groups. Women were assigned a status of “no psychiatric illness” (reference group) if no ICD-9 code corresponding to any psychiatric condition listed in the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, (DSM-IV), (American Psychiatric Association, 1994) was present in any record during the baseline or study observation years. Women were assigned a psychiatric status of “PTSD” if they had at least two records (one at baseline, one during any year of the study observation period), linked to face to face encounters with a clinician, containing the ICD-9 code 309.81 (PTSD). Women were assigned a psychiatric status of “depression” if: at least two records (one at baseline, one during any year of the study observation period), linked to face to face encounters with a clinician, containing ICD-9 codes referencing a depressive disorder were identified during the study years, and b) no record associated with the ICD-9 diagnosis code (309.81) for PTSD was found.

Seventy percent of the women in the PTSD group (n = 5,668) also had a diagnosis of depression. Given that our hypotheses were designed to illuminate if women with PTSD were uniquely vulnerable to decreased receipt of cervical cancer screening, we grouped women with PTSD (regardless of additional psychiatric illness, e.g., co-morbid depression) into a single group. Preliminary analyses revealed no differences in the rate of receiving cervical cancer screening when women with PTSD and co-morbid depression (78%) were compared to women with PTSD but not co-morbid depression (78%), $X(1) = .005$, $P = .94$, supporting the inclusion of both groups into a single “PTSD” group.

Receipt of cervical cancer screening (outcome variable)—Participants who had medical record evidence of cervical cancer screening, defined as presence of an intermediate product number code consistent with receipt of a Papanicolaou smear in the *VHA Decision Support System Fact of Lab* files (which record every lab test performed in VHA in a given year) and/or presence of a current procedural technology code consistent with receipt of a Papanicolaou smear in the *VHA outpatient administrative files* (which record all medical procedures performed in outpatient settings in VHA during a given year) at any time during

the study observation period), were deemed "screened." This definition is consistent with the minimum standards for screening for all women with a cervix set by the most commonly cited national committees making screening recommendations during the observation time: American College of Obstetrics and Gynecology (ACOG 2003; ACOG 2005); the American Cancer Society (Saslow, Runowicz, & Solomon et al, 2002) and the United States Preventive Services Task Force (2003). Using this conservative definition facilitated clear identification of "under-screening" as failure to receive screening in the 36-month observation period in contradiction to all accepted recommendations. This definition has been used in prior studies to define a group of women considered not to have met screening recommendations (Sung, Kearney, Miller, Kinney, Sawaya, & Hiatt, 2000).

Demographic variables, including age and race/ethnicity (self-reported to VHA), were established during our 12-month baseline period (October 2003 – September 2004) and extracted from VHA records. A median value of annual household income, based upon 2000 US Census tract data, was assigned to each patient (United States Census Bureau, 2000).

Physical co-morbidity—A physical co-morbidity score reflecting the presence of medical illness was created for each patient during our 12-month baseline period (October 2003 – September 2004). This variable was derived from the medical component of the Co-morbidity Index, (Selim, Fincke, & Ren, et al, 2002), a count of 36 common, non-psychiatric medical conditions(e.g., diabetes, coronary artery disease, HIV, etc) that was developed and validated for use in VA ambulatory care settings (Selim, Fincke, & Ren, et al, 2002).

Primary care use reflects the total count of primary care visits during the study observation years. A primary care visit, for the purposes of our study, was defined as a face to face visit in a VHA setting associated with one of the following primary care clinic stop codes: 170; 171; 210; 301; 318; 319; 322; 323; 350; that does not have all of its non-missing current procedural technology codes inside the range 80048–89399.

Statistical Analysis Plan

We first conducted descriptive analyses to characterize the study sample and compare differences in background characteristics (age, household income, physical comorbidity and primary care use) by psychiatric status (PTSD, depression, no psychiatric illness) using univariate, one-way analyses of variance (ANOVAs).

Chi square analyses were used to compare crude rates of screening by diagnostic status, first for the whole sample, then for each age strata (< 30; 30–39; 49–49; 50+ years). The association of psychiatric status on women's likelihood of receiving cervical cancer screening was evaluated through logistic regression analyses adjusting for age, household income, and physical comorbidities. Multiple logistic regression analyses featuring a mean-centered interaction term (psychiatric diagnosis X primary care use) were used to test the hypothesis that high levels of primary care use could offset the effects of psychiatric illness on receipt of cervical cancer screening; age, household income and physical comorbidity were entered into the model as covariates.

Sensitivity analyses were designed to determine the robustness of our findings in more inclusive cohorts of women, and to address key limitations of the data (e.g., lack of information on women's hysterectomy status. All analyses were conducted in SAS version 9.1 for UNIX (SAS Inc., Cary, NC) and STATA version 10 for Windows (STATA Inc., College Station, TX).

RESULTS

Sample Characteristics

Table 1 reveals significant differences in age, household income, physical co-morbidity and intensity of primary care use across the three diagnostic groups. Compared to women with no psychiatric illness, those with PTSD or depression had more medical illnesses and greater primary care use, *P*s < .001.

Association of PTSD, Depression to Cervical Cancer Screening

To evaluate our first hypothesis, that women with PTSD would be most vulnerable to under-screening for cervical cancer, a series of chi square analyses were implemented to compare crude rates of screening by diagnostic status (PTSD, depression, no psychiatric illness) for all women in our sample. Results revealed that 77% of women with PTSD vs. 75% of those with depression and 75% of those without psychiatric illness received cervical cancer screening during the study observation period, $P < .001$. Pair-wise comparisons revealed that women with PTSD were more likely to be screened than either those with depression or those without psychiatric illness, *P*s < .05.

Chi square analyses were also used to compare crude rates of cervical cancer screening across four age strata in our sample. Results revealed that 87% of women below age 30; 83.2% of women aged 30 – 39; 78% of women aged 40–49; and 70% of women over age 50 received screening during the study observation period, $P < .0001$. A third series of chi square analyses, designed to compare crude rates of screening by diagnostic group, (PTSD, depression, no psychiatric illness), across the four age categories were implemented next. Results for each age strata were consistent with those produced using the overall sample. In each age group, women with PTSD had the highest rates of screening, those with no psychiatric illness the lowest. However, group differences did not emerge in our youngest group, women below age 30, where rates of screening were uniformly high (90% for PTSD; 88% for depression; 86% for women without psychiatric illness, $P = .26$).

Finally, a series of logistic regression analyses evaluated the association of PTSD and Depression to cervical cancer screening in light of key confounders: age, household income, and physical comorbidities. As the association of psychiatric illness (PTSD or depression) and cervical cancer screening was consistent across age groups, age stratified analyses were not deemed necessary and regression models were applied to the entire sample. Results are presented in Table 2.

Interaction of Psychiatric Status and Primary Care Use on Cervical Cancer Screening

To evaluate our hypothesis that heavy primary care use during the study observation period might offset the effects of psychiatric illness on cervical cancer screening, we used multiple regression analyses that tested for a potential interaction between psychiatric status (PTSD, depression, no psychiatric illness) and primary care use in relation to receipt of cervical cancer screening. In this logistic model, we entered the main effects of psychiatric status, primary care use and their interaction. Results revealed a statistically significant interaction: Wald Chi Square (2) = 111.80; $P < .001$, indicating that the probability of a woman receiving cervical cancer screening was related both to her psychiatric status and use of primary care services during the study observation period. Findings held when age, physical household income and physical comorbidity were entered as covariates: Wald Chi Square (2) = 125.59, $P < .0001$.

The interaction results are graphically displayed in Figure 2. As shown, the proportion of women (all diagnostic groups) screened for cervical cancer increased with greater use of

primary care services. However, at lower levels of primary care use, women with psychiatric illness were more likely to receive screening than those without psychiatric illness. The predicted probability of receiving screening at different levels of primary care use is provided for women in each diagnostic group in the legend accompanying Figure 2.

Sensitivity Analyses

Sensitivity analyses (data not shown) confirmed that the association of psychiatric illness and cervical cancer screening, and the interaction of psychiatric illness and primary care use on cervical cancer screening held across three age strata (women aged 30–39; those age 40–49; and those aged 50 and above). Findings were robust in unadjusted analyses and those adjusted for age, household income, and physical comorbidity. Findings did not hold for women below age 30. In this group, uniformly high screening rates (90%, PTSD; 88% depression; 86% no psychiatric illness) did not vary significantly by diagnostic group: $P = .26$.

Additional sensitivity analyses revealed that the association of psychiatric illness and cervical cancer screening, including findings associated with the interaction of psychiatric illness and primary care use on cervical cancer screening held with more inclusive cohorts of women: 1) when the 39,838 women who were previously excluded because they did not have evidence of at least one primary care visit in VHA in each year of the study observation period were incorporated into the sample; 2) when the 4,519 women who received care outside of the US were included; and 3) when the 2,778 women with medical record evidence of PTSD at baseline or during observation, but not both and the 5,143 women with medical record evidence of depression at baseline or during observation, but not both, were added to the sample. Findings were robust in unadjusted analyses and those adjusted for age, household income, and physical co-morbidity.

DISCUSSION AND CONCLUSIONS

Contrary to expectation, women with PTSD were more likely to receive cervical cancer screening than women without psychiatric illness, and findings held after adjustment for the effects of age, household income and physical comorbidity. As expected, the interaction of primary care use and diagnostic status was significant, even after accounting for the effects of age, household income and physical comorbidities. However, in contrast to our hypothesis, findings revealed that amongst low users of primary care services, women with psychiatric illness (either PTSD or depression) were more likely than those without to be screened. However, among high users of primary care services those with psychiatric illness (PTSD or depression) were less likely to be screened.

Our findings contrast with prior studies that document an association between depression and decreased receipt of cervical cancer screening (Kaida et al., 2008; Ludman et al, 2010; Miller et al., 2007; Pirraglia et al, 2004; Vigod et al., 2011). This difference likely reflects some unique features of the VHA health care environment, such as the decoupling of financial means or insurance status from access to health care, that may serve to “level the playing field” for patients with psychiatric illness. Our finding that heavy use of primary care services did not yield equivalent odds of screening among women with vs. without psychiatric illness more difficult to understand, may reflect the impact of greater severity of medical illness (e.g., the prioritization of treatment for chronic health problems over preventive health care) in women with PTSD or depression. Further research is warranted to more fully understand the relationship of psychiatric illness, health care utilization and preventive health care.

Some elements of our study methodology warrant discussion. First, our sample was restricted to female veterans using VHA facilities. This may limit the generalizability of our findings to settings (even those serving female veterans) beyond VHA. Second, reliance on data drawn from VHA's archival medical records may have increased the potential for the misclassification of participants, either by psychiatric diagnosis or cervical cancer screening status. In particular, some women may have received screening outside VHA (which would not be captured in the databases available for this study). However the requirement that women in the sample receive VHA primary care across baseline and four consecutive (study observation) years was meant to select for women who were relying on VHA for primary care, and thus whose cervical cancer screening, if any, would be detected. Third, potential confounders that we could not measure (e.g., race, ethnicity, primary language, geographic location, prior history of cervical cancer screening, severity or longevity of PTSD or depression, current or prior treatment for PTSD or depression, insurance status, use of non-VA facilities for health care) may have impacted women's receipt of screening, but are unaccounted for in our findings. Information on women's service connection was not included in the present study, however, this factor should not impact screening rates as women veterans with and without service connection are eligible for preventive health care services, such as cervical cancer screening, within VHA. Most importantly, we were unable to account for women's hysterectomy status, a factor that may greatly influence screening rates particularly amongst older women. However, as our results reveal a consistency in the association of PTSD and depression to likelihood of receiving cervical cancer screening across four incremental age strata, it is unlikely that lack of information on women's hysterectomy status impacted our study's conclusions. Finally, some of the reported differences are small and should be viewed in light of their clinical, rather that statistical, significance. Nevertheless, the results of the present study extend the prior literature on this topic and offer several salient implications for clinical practice, research and policy.

Implications for Practice and/or Policy

Generally equitable rates of cervical cancer screening amongst women with and without psychiatric illness likely reflects unique features of the VHA healthcare environment including: a) intentional decoupling of access to healthcare from patients' financial or insurance status; b) universal screening of common psychiatric disorders (Corson, Gerrity, & Dobscha, 2004; Kimerling, Ouimette, Prins, et al., 2005); and c) co-location of primary care and mental health services (Wray, Szymanski, Kearney & McCarthy, 2012). Thus, the broader clinical (even policy) implications of this finding may relate to the benefits of adopting some or all of these key practices which may help to reduce the risk of screening disparities in civilian health care environments.

The complex interaction of psychiatric illness, primary care use and cervical cancer screening uncovered a hidden pocket of vulnerability in our sample. Health care providers who administer the pelvic examination must remain vigilant in their efforts to ensure that the preventive health care needs (e.g., cervical cancer screening) of women with psychiatric illness and heavy use of health care services are not neglected.

Finally, our study offers several implications for future research. Studies designed to replicate our findings and test their generalizability to settings beyond VHA are warranted, as are studies to identify modifiable factors associated with the vulnerability of specific subgroups such as women with psychiatric illness who are high users of health care services. Our findings also highlight the complexities associated with statistical confounding (e.g., of psychiatric illness with greater primary care use) commonly found in health disparities research (c.f., Asch & Armstrong, 2007; Bickel, Hammel, & O'Connel, 1975; Wilcox, 2006). Thus, a final implication may be that future research on receipt of cervical cancer screening in women with psychiatric illness should focus upon questions of when and how

(not if) women with psychiatric illness are vulnerable to inequities in screening, because inquiry into the mechanisms driving screening disparities will guide efforts to rectify them.

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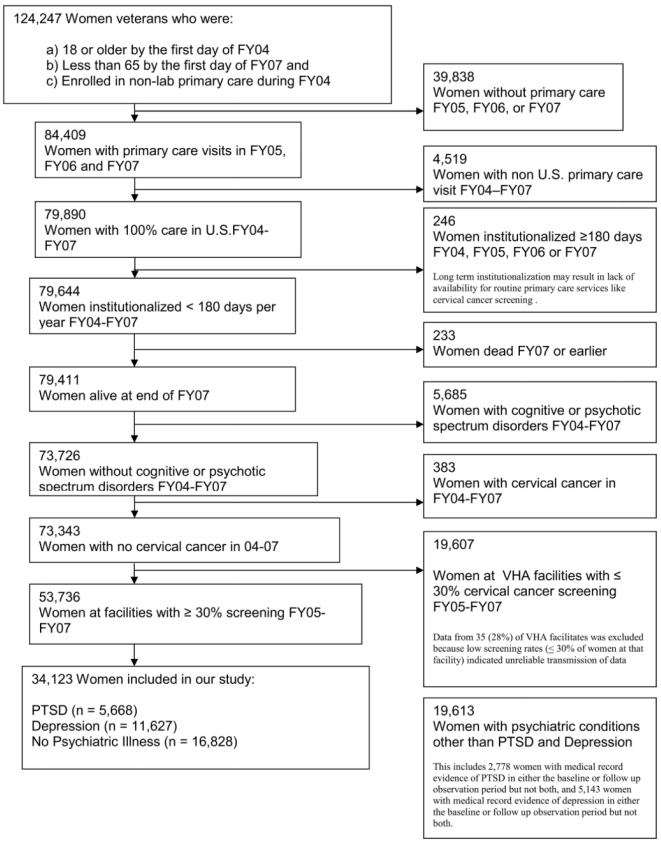


Figure 1.
Sample Selection

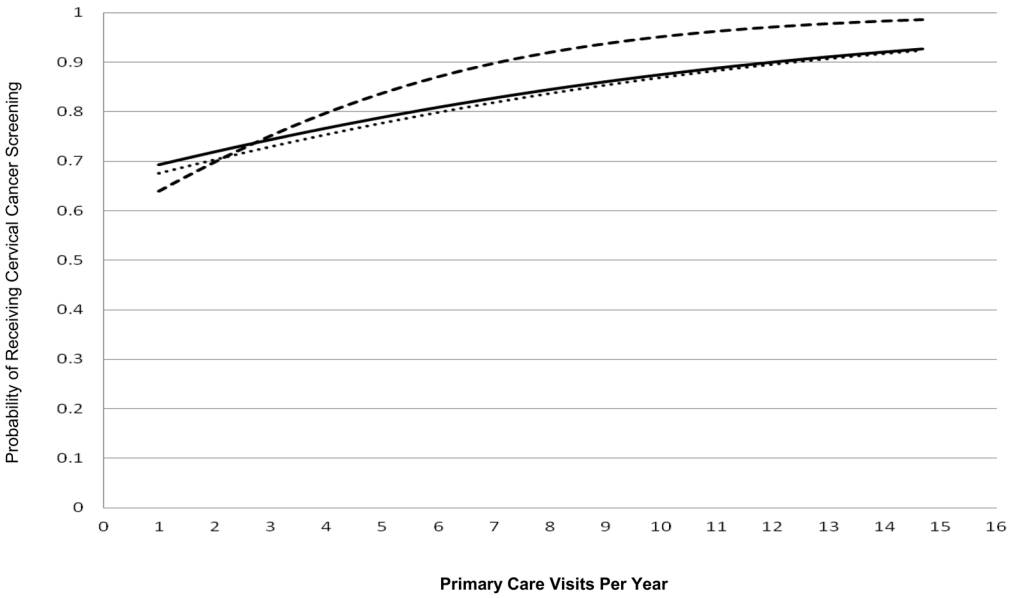


Figure 2.

Association of Psychiatric Status and Receipt of Cervical Cancer Screening as a Function of Primary Care Use

__ __ __ No Psychiatric illness (Reference Group)

_____ PTSD

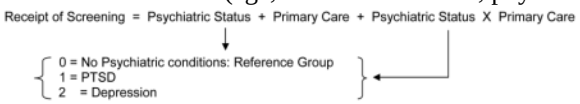
…….. Depression

Data Table. Predicted Probability of Receiving Cervical Cancer Screening by Diagnostic Group and Primary Care Use

	1 Visit Per Year	3 Visits Per Year	4 Visits Per Year	6 Visits Per year
PTSD	.69	.74	.77	.81
Depression	.67	.73	.75	.80
No Psychiatric illness	.64	.75	.80	.87

Notes:

1. Statistical Model: (age, household income, physical comorbidity are covariates)



2. For ease of interpretability, the graph was truncated at 15 appointments per year. Outliers (e.g., women with > than 15 appointments per year represented < 1% of the data) and were excluded from this graph.

3. As the unadjusted and fully adjusted interaction models were highly similar, for ease of interpretability, we have presented the unadjusted interaction results in a single graph. Visual presentation of the fully adjusted model would have required multiple graphs, one for each combination of the covariates.

Table 1

Sample Characteristics by Psychiatric status

	PTSD *N* = 5,668		Depression *N* = 11,627		No Psychiatric Illness *N*= 16,828		Omnibus P Value
	Mean	**(SD)**	**Mean**	**(SD)**	**Mean**	**(SD)**	
Age at Baseline	43.9	(8.7)	44.7	(9.02)	44.2	(9.8)	< .001[b,c]
Household Income[∞]	47.6	(14.5)	46.8	(13.4)	47.2	(14.2)	= .001[b,c]
Physical Co-morbidity	2.4	(1.8)	2.3	(1.8)	1.7	(1.4)	< .001[a,b,c]
Primary care Use	4.9	(3.7)	4.4	(3.3)	3.2	(2.3)	< .001[a,b,c]

Notes. Maximum baseline age was 61. Abbreviations: Posttraumatic stress disorder (PTSD); standard deviation (SD).

[∞] Household Income Values are X 1000. P values represent Omnibus comparisons of values for each diagnostic group within a given age subgroup;

[a] represents significant differences between women within PTSD and no psychiatric illness;

[b] signifies significant differences between women with depression and no psychiatric illness and

[c] signifies significant differences between PTSD and depression within a given age subgroup.

Table 2

Association of Psychiatric Status and Receipt of Cervical Cancer Screening

	N = 34,213	
Unadjusted	**OR**	**(95% CI)**
PTSD	**1.17**	(1.09 – 1.26)
Depression	1.04	(.98 – 1.09)
Adjusted for age		
PTSD	**1.15**	(1.07 – 1.24)
Depression	1.05	(.99 – 1.11)
Adjusted for age, income		
PTSD	**1.14**	(1.06 – 1.23)
Depression	1.06	(1.00– 1.12)
Adjusted for age, income, physical comorbidity		
PTSD	**1.14**	(1.06 – 1.22)
Depression	1.05	(.99 – 1.12)

Note. Abbreviations: Posttraumatic stress disorder (PTSD); Odd's Ratio (OR); Confidence Interval (CI). Reference group for all comparisons: women without psychiatric illness. Statistically significant Odd's Ratios are bolded; OR < 1 indicates that screening is less likely among women with a psychiatric illness (PTSD or depression) compared to women in the reference group.