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Satisfaction with Cancer Care Among Underserved Racial-Ethnic Minorities And Lower Income Patients Receiving Patient Navigation

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Abstract

BACKGROUND—Patient navigation is a barrier-focused program of care coordination designed to achieve timely and high quality cancer-related care for medically underserved racial-ethnic minorities and the poor. However, few studies have examined the relationship between satisfaction with navigators and cancer-related care.

METHODS—We included data from 1,345 patients with abnormal cancer screening or definitive cancer diagnosis who participated in the Patient Navigation Research Program to test the efficacy of patient navigation. Participants completed demographic questionnaires and measures of Patient Satisfaction with Cancer-related Care (PSCC) and Patient Satisfaction with Interpersonal

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Characteristics of Navigators (PSN-I). We obtained descriptive statistics to characterize the sample, and conducted regression analyses to assess the degree of association between PSN-I and PSCC, controlling for demographic and clinical factors. We conducted analysis of variance to examine group differences controlling for statistically significant covariates.

RESULTS—We found statistically significant relationships between the PSCC and PSN-I for patients with abnormal cancer screening (*N*=1040, r=0.4, $p<0.001$) and definitive cancer diagnosis (*N*=305, r=0.4, $p<0.001$). The regression analysis showed that having abnormal colorectal cancer screening in the abnormal screening group and increased age and minority race-ethnicity status in the cancer diagnosis group were associated with higher satisfaction with cancer care ($p<0.01$).

CONCLUSION—Satisfaction with navigators is significantly associated with satisfaction with cancer-related care. Information about the patient-navigator relationship should be integrated in patient navigation programs to maximize the likelihood of reducing caner disparities and mortality for medically underserved racial-ethnic minorities and the poor.

Keywords

Cancer Disparities; Psychometrics; Psychometric Validation; Patient Navigators; Patient Satisfaction with Navigators; Patient Satisfaction with Cancer-related Care

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INTRODUCTION

Patient navigation (PN) is a barrier-focused model of care coordination and support designed to achieve timely and high quality cancer-related care by helping medically underserved racial-ethnic minorities and lower income individuals overcome material and logistical barriers (e.g., economic, lack of medical insurance, transportation) to accessing and utilizing health care resources.[1–4] Recently, PN has been included in health care legislation and accreditation standards, leading to widespread implementation of the PN model.[5] PN programs have been widely implemented by a variety of health professional and lay individuals, in many types of clinical care settings, and using several different approaches. While certain professional organizations have provided guidelines regarding how navigation should ideally be implemented,[6–9] there is currently little information regarding characteristics of patient navigators that are associated with high quality cancer care or patient satisfaction.

There are relatively few well-designed studies evaluating whether patient navigation is associated with higher patient satisfaction with cancer care. Four known studies have evaluated whether patients receiving PN were more satisfied with care by comparing them to patients who did not [10–14] or by comparing patients' ratings of satisfaction before and after participating in a PN intervention.[15] The results of these studies are mixed. Two studies reported that patients who received PN had higher satisfaction than those who did not receive PN,[10,15] whereas two other studies did not find a difference in satisfaction with care between those who received PN and those who did not.[11–14] This discrepancy may be related to variation in the patient navigators' technical skills and the interpersonal relationship between the patient and the patient navigator. Satisfaction with interpersonal aspects of health care is a key component of patient satisfaction with cancer care.[16] Previous research indicates that high patient satisfaction with cancer care was associated with multiple patients' rankings of navigators in terms of their interpersonal relationship with the navigator.[17]

The objective of the present study was to determine whether satisfaction with interpersonal relationship with a navigator was significantly associated with satisfaction with cancer-related care, controlling for socio-demographic characteristics (e.g., age, sex, race, and ethnicity, etc.) and cancer type. We hypothesized that satisfaction with cancer care would be significantly related with the extent to which the patient feels engaged with or connected to the patient navigator. If confirmed, findings of this study would provide critical information to PN training programs about the importance of the interpersonal connection of the patient navigators with the cancer patients they work with. We reasoned that this effect would have implications above and beyond needed material and logistical supports to help cancer patients overcome various types of barriers (e.g., financial, lack of or insufficient health insurance, health and health care literacy, logistical issues) to timely initiation and ongoing cancer-related care.

MATERIALS AND METHODS

Participants

The Patient Navigation Research Program (PNRP) was a ten-site study designed to assess the efficacy and cost-effectiveness of PN. All PNRP sites defined PN as "support and guidance offered to vulnerable persons with an abnormal cancer screening or cancer diagnosis with the goal of overcoming barriers to timely, quality care".[18] Sites in the program utilized various models of patient navigation designed to improve cancer care delivery. PNRP patient navigators received standardized annual training in addition to continuous teaching and guidance at their specific PNRP sites.[19] All PNRP study participants experienced an abnormal cancer screening or symptom, or a pathologically confirmed diagnosis of breast, cervical, colorectal, or prostate cancer.[18] The present study combined data collected from eight of the ten PNRP sites that collected satisfaction data between 2007 and 2011. Data were collected on satisfaction with cancer-related care following diagnostic resolution of the cancer abnormality or within three months of the initiation of cancer treatment.

The present study included data from 1,345 patients with abnormal cancer screening or definitive cancer diagnosis who were allocated to the navigation arm of the multisite National Cancer Institute (NCI) and American Cancer Society (ACS) sponsored PNRP. All patients provided signed informed consent to voluntarily participate in the PNRP study. The Institutional Review Boards of participating PNRP institutions reviewed and approved conduct of this study. A total of 1040 patients with abnormal cancer screening and 305 patients with pathologically confirmed diagnosis of cancer completed both the PSCC and PSN-I and were included in the analyses.

Procedures

Participants were identified and referred to the PNRP by staff at collaborating clinics and hospitals, particularly federally qualified health centers. Participants were assigned to the patient navigation arm of the trial according to each specific site's protocol, and were contacted to complete a battery of measures within 3 months of diagnostic resolution of an abnormal cancer finding or initiation of cancer treatment. All English and Spanish speaking cancer patients who participated in the PNRP completed the PSN-I, PSCC, and other measures in the language in which they were proficient (i.e., English or Spanish). The study team member, fluent in the language of presentation, read the PSN-I and PSCC items aloud to participants to minimize any possible bias related to low literacy. Items of the PSN-I and PSCC instruments were translated (i.e., English to Spanish) and back translated (i.e., Spanish to English) by professional translators as well as expert native Spanish speakers familiar with the concepts and terminology included in the PSN-I and PSCC measures.

Eligibility and Exclusion Criteria

Patients were eligible to participate in the present study if they had an abnormal screening test for breast, cervical, colorectal, or prostate malignancies, or a new pathologically confirmed diagnosis of one of these aforementioned cancers. Participants with any prior history of cancer treatment, except for non-melanoma skin cancer, were excluded from the present study.

Measures

Demographic and Clinical Characteristics—Socio-demographic (e.g., age, sex, race-ethnicity, primary language, income, education, marital status) and clinical characteristic data including cancer types (i.e., breast, cervical, colorectal, or prostate) were collected from patients or abstracted from medical records by PNRP research assistants at participating sites.

In order to address if racial/ ethnic concordant dyads between navigators and patients predicted satisfaction, we included demongraphic data collected on navigators, which included the same categorization of race/ethnic. We found 342 (43.7%) race/ethnicity discordant pairs of Patient-Navigator dyads, and 440 (56.3%) concordant pairs of patient-navigator dyads.

Patient Satisfaction with Interpersonal Relationships With Navigators—The development of the PSN-I and psychometric indices of this measure are previously described.[20–21] The PSN-I demonstrated reliable and valid psychometric indices with items loading on a single principal component that accounted for 76.6% of the variance in patient satisfaction with interpersonal relationships with navigators. Items were summed to obtain an overall PSN-I scale score, which demonstrated high internal reliability (Cronbach's alpha = 0.95). A higher PSN-I scale score indicates higher patient satisfaction.

Patient Satisfaction with Cancer-related Care (PSCC)—The development of the PSCC and its psychometric indices are also previously described.[22–23] The PSCC demonstrated reliable and valid psychometric indices with all the items loading on one principal component that accounted for 62% of the variance in patient satisfaction with cancer-related care. Items were summed to obtain an overall PSCC scale score, which demonstrated high internal reliability (Cronbach's alpha = 0.95). A lower PSCC scale score indicates higher patient satisfaction. Items were summed to obtain an overall PSCC scale score, with a higher PSCC scale score indicating greater satisfaction with cancer care.

Data Analysis

We characterized the sample using descriptive statistics. These statistics were generated for socio-demographic variables and cancer stage, and included participant age, sex, race-ethnicity, education, marital status, employment, income, primary language, and health insurance coverage measures (Table 1).

We also calculated total scale scores for both the PSCC and the PSN-I, and computed Pearson's product moment correlation coefficients between these total scores among patients who had abnormal screening or definitive cancer diagnosis to determine the association between the two measures of patient satisfaction. These total scale scores were also used in standard multiple regression analysis models to determine whether satisfaction with navigators was significantly related to satisfaction with cancer-related care, adjusting for the effects of socio-demographic and cancer stage. Analyses of variance were then conducted to determine whether there were statistically significant group differences in satisfaction with cancer-related care on the categorical covariates for individuals in both the abnormal cancer screening and definitive cancer diagnosis groups.

Additionally, we conducted analysis of variance (ANOVA) to determine what patient characteristics (e.g., sex, race-ethnicity, cancer site, and education) influenced satisfaction with navigation for participants with either an abnormal cancer screening test or a pathologically confirmed cancer diagnosis. Next, we ascertained whether Patient-Patient Navigator dyads were concordant or discordant with respect to race-ethnicity. We performed independent sample t-tests to examine possible effects of race concordance versus race discordance in Patient-Navigator dyads on satisfaction with navigation for the abnormal cancer screening test and definitive cancer diagnosis groups. We also conducted independent sample t-tests for each satisfaction measure, comparing those with a cancer diagnosis to those without a cancer diagnosis. Lastly, we calculated the number of persons with an abnormal screening test who had a final cancer diagnosis, and compared their scores on the PSCC and PSN-I measures using two-sample t-tests.

RESULTS

Sample Characterization

Participants ranged in age from 18 to 92 years for those with an abnormal cancer screening test and those in the definitive cancer diagnosis group. Our study sample was predominantly female, and included participants with varying educational, employment, socioeconomic, and racial-ethnic backgrounds (Table 1).

Standard Multiple Regression Analysis in Patients with Abnormal Screening

Regression analysis on PSCC Total Score (dependent) with PSN-I Total Score (independent) showed that satisfaction with interpersonal relationship with the navigators predicts satisfaction with diagnostic cancer-related care (Standardized Coefficients Beta ($SC\beta$) = 0.353, $t = 11.270$, $p < 0.001$). After controlling for covariates, patient satisfaction with interpersonal relationship with the navigator (PSN-I) remained the strongest association with patient satisfaction with cancer-related care ($SC\beta$) = 0.330, $t = 10.681$, $p < 0.001$). Results also indicated a significant negative association for participants with abnormal colorectal cancer screening ($SC\beta = -0.142$, $t = -3.141$, $p < 0.002$) and satisfaction with cancer-related care (Table 2).

One-way Analyses Of Variance (ANOVA) For The Effects Of Statistically Significant Covariate(s) In The Abnormal Cancer Screening Group

Results of a one-way ANOVA on the effect of abnormal cancer screening test (F [3, 1033] = 13.062, $p < 0.001$) showed that patients with different cancer screening types differ significantly in their satisfaction with diagnostic cancer-related care. Note that the category of multi-site cancer screening was excluded from the data analysis because there was only one patient in that group. Post-hoc analyses revealed that patients with an abnormal screening for colorectal cancer ($N = 74$, $Mean = 69.5135$, $SD = 15.3357$) were less satisfied with their diagnostic cancer-related care as compared to patients with an abnormal screening for breast cancer ($N = 671$, $Mean = 76.9523$, $SD = 9.9436$, $p < 0.001$), cervical cancer ($N = 181$, $Mean = 77.5359$, $SD = 10.0468$, $p < 0.001$), or prostate cancer ($N = 111$, $Mean = 74.9910$, $SD = 8.57427$, $p < 0.002$).

Standard Regression Analysis in Patients with Definitive Cancer Diagnosis

Multiple regression of PSN-I Total Score on PSCC Total Score in patients with definitive cancer diagnosis revealed that satisfaction with interpersonal relationship with navigators predicts satisfaction with cancer-related care ($SC\beta = 0.387$, $t = 6.834$, $p < 0.001$). After controlling for covariates, satisfaction with interpersonal relationship with navigator remained the strongest predictor of satisfaction with cancer care ($SC\beta = 0.298$, $t = 5.082$, $p < 0.001$). Age ($SC\beta = 0.160$, $t = 2.312$, $p = 0.022$) also made statistically significant contributions to the model (Table 3). Race-ethnicity/Blacks or African Americans ($SC\beta = 0.599$, $t = 2.960$, $p < 0.003$), Whites ($SC\beta = 0.641$, $t = 3.199$, $p < 0.002$), and Hispanics/Latinos ($SC\beta = 0.513$, $t = 2.646$, $p < 0.009$) compared to those in “Other race-ethnicity” also made statistically significant contributions to the model (Table 3). There were only five individuals in the group of other race-ethnicity ($N = 5$, $Mean = 64.80$, $SD = 15.01$); therefore they were excluded from the regression analysis. No categorical covariate significantly predicted PSCC for the group with definite cancer diagnosis.

ANOVA of Participant Demographics Influencing Satisfaction with Navigators

For patients with an abnormal cancer screening test we found statistically significant group differences based on sex (F (1, 1035) = 11.04, $p < 0.001$), cancer site (F (4, 1032) = 2.99, $p < 0.02$) and education (F (6, 968) = 2.501, $p < 0.021$). Women, patients with multiple cancers and breast cancer, and lower education from the abnormal test group were more satisfied. For participants who received treatment for a pathologically confirmed cancer, our analysis revealed statistically significant group differences based on sex (F (1, 364) = 17.09, $p < 0.001$) and cancer site (F (4, 359) = 6.526, $p < 0.001$), but not education. Women and individuals with multiple cancers and breast cancer were more satisfied.

We considered patient and navigator pairs to be concordant on race-ethnicity if they were from the same racial-ethnic background (e.g., a Black patient and Black navigator pair, or a White patient and a White navigator pair, or a Hispanic patient and a Hispanic navigator pair). Of the # subject pairs, N = 440 were concordant, and N = 342 were discordant. T-tests to examine the effects of race concordance (440) versus race discordance (342) in Patient-Navigator dyads on satisfaction with navigation showed no statistically significant difference for both the abnormal cancer screening test and definitive cancer diagnosis groups (all *p-value*s > 0.05). Additionally, a small percentage (9.71%) of participants with an abnormal cancer screening test obtained a definitive cancer diagnosis. We found no statistically significant difference based on final cancer diagnosis in satisfaction with cancer-related care and navigators between those with abnormal screening tests who did and those who did not progress to a final cancer diagnosis (all *p-value*s > 0.05).

DISCUSSION

In the present study, we address the paucity of data on the relationship between patients' satisfaction with their navigators and their cancer-related care. We developed and tested predictive models to determine whether participant satisfaction with their interpersonal relationship with their navigators predicts satisfaction with cancer-related care for patients with abnormal cancer screening or definitive diagnosis of malignant tumors, using standard multiple regression analyses. Results of the regression analyses revealed that satisfaction with participant relationships with their navigators predicts satisfaction with cancer-related care. After adjusting for several socio-demographics and clinical covariates such as sex, age, race-ethnicity, income, health insurance, education, and cancer sites, satisfaction with navigators remained the strongest predictor of satisfaction with cancer-related care. These results support our hypothesis that satisfaction with cancer-related care is associated with the extent to which a cancer patient feels engaged by or connected to his or her patient navigator. We also found that certain participant characteristics (e.g., sex (female), cancer site (multiple sites and breast) and lower education for participants with an abnormal cancer screening test, and sex (female) and cancer site (multiple sites and breast) for participants with a definitive cancer diagnosis) may influence satisfaction with navigation. We believe further studies to help researchers, clinicians, and hospital and clinic administrators better understand and describe key components of patient navigation programs that can be manipulated to help increase the effectiveness of programs to reduce cancer disparities and mortality for traditionally marginalized and medically underserved patients are needed.

The findings of the present study highlight the importance of interpersonal relationship in the patient-navigator dyad. More importantly, these findings underscore the urgent need to better understand, characterize and integrate information about the dynamics of the patient-navigator interpersonal relationship in important aspects (e.g., selection, teaching, training, and process-monitoring evaluation) of PN programs. Our findings also revealed no evidence of any effect of race concordance or discordance in patient-navigator dyads on satisfaction with navigation and satisfaction with cancer-related care. Future studies are needed to systematically examine the relationship among interpersonal, intrapersonal and situational factors that can impact patients’ satisfaction with their navigators and their cancer-related care.

In addition to the effect of participant satisfaction with the interpersonal relationship with their navigators as a quantifiably significant predictor of satisfaction with cancer-related care, the results of our analyses also showed that cancer site significantly predicted satisfaction with cancer-related care for participants from the abnormal cancer screening subsample. Specifically, patients with abnormal screening for colorectal malignancies were less satisfied with the cancer-related care they received compared to those with an abnormal screening for cervical cancer. These findings may indicate that certain underlying factors specific to cancer sites or types (e.g., breast, cervical, colorectal, prostate) may be differentially impacting patients’ understanding of the cancer care process, and their evaluation and perception of the quality and meaningfulness of the cancer-related care they received.

Data from the present study need to be interpreted cautiously for several reasons. First, our findings are cross-sectional and subject to response bias although we attempted to minimize this. Second, the generalizability of these findings across sex and cancer types needs to be explored further. The majority of participants in this study sample were females who presented with breast cancer issues (e.g., abnormal screening or pathologically confirmed malignancies), and therefore may not be fully representative across all cancer populations. Additionally, we could not assess causality between satisfaction with navigators and satisfaction with cancer care in the present study. Future studies are needed to test the hypotheses generated in the present study. Furthermore, we did not control for the plausibility of a response set where patients who report satisfaction with one aspect of care are more likely to report satisfaction with other aspects of care. Last, we did not assess personality and social cognition factors that could have helped us more systematically describe important and/or nuanced attributes of patient-navigator relationships. Despite these limitations, however, the findings of the present study are important and timely.

PN programs are being implemented across the United States as a reliable tool to reduce or eliminate cancer disparities by helping patients from medically underserved racial-ethnic minority and lower income groups better coordinate their cancer care, and access timely and equitably beneficial cancer treatment. Future prospective studies need to test the influence of personality characteristics, social cognition, and other intrapersonal and interpersonal factors on the patient-navigator relationship and PN outcomes. This strategy will inform the appropriate application of PN programs to eliminate disparities in cancer and improve survivals for the poor and underserved in our communities.

CONCLUSION

The findings of our present analysis demonstrated that satisfaction with navigators is associated with satisfaction with cancer-related care for patients with both abnormal cancer screening and pathologically confirmed cancer diagnosis. These findings support the need to better understand the role of interpersonal relationships in patient navigation programs including impact on outcomes beyond satisfaction with care among individuals from underserved racial-ethnic minorities and poor communities throughout the United States. Appropriate integration of information about the interpersonal relationship between patient and their navigators and selection and training of navigators based on interpersonal relationships may help improve PN programs, and could also help maximize the benefits of these PN programs to reduce cancer disparities and mortality for medically underserved and minority populations across varied communities in the United States.

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Table 1

Patients Socio-demographic and Clinical Characteristics (N = 1345).

	Abnormal Screening (*N* = 1040)	**Definitive Diagnosis (*N* = 305)**
Characteristic	*Range, Mean, SD*	*Range, Mean, SD*
Age (18–92 years)	(18–92), 47.53, 13.97	(18–87), 55.67, 13.03
	N (%)	N (%)
Sex		
Female	897 (86.3)	241 (79.0)
Male	143 (13.7)	64 (21.0)
Race/ethnicity		
White	336 (32.3)	104 (34.1)
Black/African American	324 (31.2)	112 (36.7)
Hispanic or Latino	360 (34.6)	78 (25.6)
Other	19 (1.8)	5 (1.6)
Missing	1 (0.1)	6 (2.0)
Primary language		
English	763 (73.4)	265 (86.9)
Spanish	254 (24.4)	35 (11.5)
Other	22 (02.1)	4 (1.3)
Missing	1 (0.1)	1 (0.3)
Birth country		
United States	689 (66.3)	237 (77.7)
Other	351 (33.7)	68 (22.3)
Marital status		
Single/never married	305 (29.3)	78 (25.6)
Married/living as married	438 (42.1)	124 (40.7)
Divorced/separated	239 (23.0)	69 (22.6)
Widowed	46 (04.4)	31 (10.2)
Missing	12 (1.1)	3 (0.9)
Education		
Less than High School	256 (24.6)	73 (23.9)
High school diploma/GED	215 (20.7)	65 (21.3)
Some college/Vocational/Associate	284 (27.3)	102 (33.4)
College graduate	223 (21.4)	59 (19.8)
Missing	62 (6.0)	6 (2.0)
Household income		
Less than $10,000	250 (24.0)	75 (24.6)
$10,000 to $29,999	343 (33.0)	109 (35.7)
$30,000 to $49,999	121 (11.6)	43 (14.1)
$50,000 or more	213 (20.5)	47 (15.4)
Missing	113 (10.9)	31 (10.2)
Employment status		

	Abnormal Screening (*N* = 1040)	**Definitive Diagnosis (*N* = 305)**
No current employment	514 (49.4)	186 (61.0)
Part-time employment	156 (15.0)	37 (12.1)
Full-time employment	326 (31.3)	76 (24.9)
Missing	44 (4.3)	6 (2.0)
Health insurance coverage		
Uninsured	289 (27.8)	47 (15.4)
Public	382 (36.7)	137 (44.9)
Private	357 (34.3)	119 (39.0)
Missing	12 (1.2)	2 (0.6)
Cancer site		
Breast	671 (64.5)	197 (64.6)
Cervix	181 (17.4)	28 (9.2)
Colorectal	74 (7.1)	29 (9.5)
Prostate	111 (10.7)	49 (16.1)
Multiple concurrent cancer sites	1 (0.1)	
Missing	2 (0.2)	2 (0.70)

Table 2

Summary of Multiple Regression Analysis For Variables Predicting Patients' Satisfaction With Cancer-related Care For Patient With Abnormal Cancer Screening.

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	**Std. Error**	**Beta**	**t**	**Sig.**
1 (Constant)	51.878	2.205		23.525	.000
Satisfaction with Navigator	.613	.054	.353	11.270	.000
2 (Constant)	54.050	3.443		15.696	.000
Satisfaction with Navigator	.573	.054	.330	10.681	.000
Sex	−3.706	2.335	−.124	−1.587	.113
Age	.037	.031	.047	1.177	.239
Black	.585	2.563	.025	.228	.820
White	2.351	2.501	.105	.940	.348
Hispanic	−.017	2.622	−.001	−.006	.995
Uninsured	−1.011	1.189	−.043	−.850	.396
Public Insurance	.512	1.100	.023	.465	.642
Breast Cancer	−1.722	1.044	−.078	−1.649	.100
Colorectal Cancer	−5.696	1.813	−.142	−3.141	.002
Prostate Cancer	−.659	2.810	−.020	−.234	.815
Education (< High School)	−1.773	1.249	−.074	−1.419	.156
Education (HS Diploma)	−.148	1.163	−.006	−.127	.899
Education (Some college, vocational, Associate degree)	−.167	1.019	−.007	−.164	.870
Income (< $10,000)	−1.424	1.413	−.059	−1.007	.314
Income ($10K – $29,999)	−.233	1.272	−.011	−.184	.854
Income ($30K – $ 49,999)	−.161	1.237	−.005	−.130	.897

[a]. Dependent Variable: Total Scale Score on the PSCC.

Table 3

Summary of Multiple Regression Analysis For Variables Predicting Patients’ Satisfaction With Cancer-related Care for Patients With Definitive Cancer Diagnosis.

Coefficients[a]

	Unstandardized Coefficients		**Standardized Coefficients**		
Model	**B**	**Std. Error**	**Beta**	**t**	**Sig.**
1 (Constant)	49.475	4.314		11.470	.000
Satisfaction with Navigator	.697	.104	.384	6.708	.000
2 (Constant)	53.392	5.968		8.946	.000
Satisfaction with Navigator	.540	.106	.298	5.082	.000
Sex	−4.301	3.478	−.176	−1.237	.217
Age	.129	.056	.160	2.312	.022
Black	−.910	1.493	−.042	−.610	.543
Hispanic	−1.982	1.832	−.086	−1.081	.281
Uninsured	−.815	2.184	−.029	−.373	.709
Public insurance	.250	1.756	.012	.142	.887
Cervical Cancer	−.429	2.355	−.012	−.182	.856
Colorectal Cancer	−.504	2.520	−.015	−.200	.842
Prostate Cancer	−3.819	3.819	−.143	−1.000	.318
Education (< High School)	.458	2.231	.019	.205	.838
Education (HS Diploma)	1.103	1.984	.045	.556	.579
Education (Some college, vocational, Associate degree)	−.033	1.784	−.002	−.018	.985
Income (< $10,000)	−1.985	2.406	−.086	−.825	.410
Income ($10K – $29,999)	−3.374	2.079	−.160	−1.623	.106
Income ($30K – $ 49,999)	−2.474	2.168	−.085	−1.141	.255

[a]. Dependent Variable: Total Score on the PSCC.