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Breast Health and Access to Care in the Kentucky Women's Health Registry

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Sarah Yeiser, Student

Katherine Eddens, MPH, PhD, Committee Chair

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**BREAST HEALTH AND ACCESS TO CARE IN THE
KENTUCKY WOMEN'S HEALTH REGISTRY**

CAPSTONE PROJECT PAPER

A paper submitted in partial fulfillment of the
Requirements for the degree of
Master of Public Health
in the
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By
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Introduction

Breast cancer is the second leading cause of death (14%) among all cancers in women in Kentucky.¹ In 2010 the United States incident rates of breast cancer in white women were 122.6 per 100,000, and 118 per 100,000 in black women.² Although breast cancer is diagnosed more in white women, black women are more likely to die from breast cancer and usually have more advanced stages of breast cancer upon diagnosis.² In Kentucky from 2003-2007 the age-adjusted breast cancer mortality rate was 23.6 per 100,000 in white women and 32.8 per 100,000 black women. Black women die from breast cancer at a higher rate than any other group in Kentucky.¹

Healthy People 2020 named “Access to Health Services” and “Social Determinants of Health” on their “Leading Health Indicators” list as high priority health issues. Health insurance and health care access are two integral parts of social determinants of health.³ Racial and ethnic minorities, comprising one-third of the US population, are less likely to have insurance than the rest of the population.⁴ The Department of Health and Human Services reported that this disparity, more than any other barrier, negatively affects the quality of care received by minority populations.⁴ In 2010, according to a study by the Centers for Disease Control and Prevention, 25% of women over 40 in the US were not compliant with mammography screening recommendations, with mammography use lower in women without health insurance or a primary source of health care.²

Research using data from the National Cancer Institute Surveillance, Epidemiology and End Results (SEER) program registries revealed that black women with breast cancer had lower five-year survival rates, regardless of stage and age, and were more likely to be

diagnosed with tumors with worse prognosis.⁵ A recent study using SEER Medicare data found that black women with breast cancer had less evidence of at least one primary care visit, lower rates of breast cancer screenings, and longer delays in treatment.⁶ There were differences in survival and were primarily related to presentation at diagnosis more than treatment differences between white and black women.⁶ Multiple studies have examined the correlation between health insurance and breast cancer, including evidence of association between individuals without insurance or with Medicaid and more advanced stages of breast cancer at diagnosis and poorer outcomes.⁶⁻¹¹ A cohort study among black women revealed that regular use and adherence to mammography screening were most associated with having health insurance, more than any other socioeconomic factor.¹²

Little research has been performed specific to the Kentucky population in relationship to health insurance status and breast cancer. One study focused on cancer survival and health insurance by examining the Kentucky Cancer Registry. Women with breast cancer who had private insurance, Medicare, or other federally funded healthcare had better survival rates than women with Medicaid.¹³ After controlling for length of follow-up, age, stage, health insurance, and treatment, black women with breast cancer still had a higher risk of death than white women (39%).¹³ The increased detrimental effect of breast cancer on black populations, and especially low-income individuals, has also been attributed to other factors including individual's diet, differences in the biology of tumors in black women, cultural and psychosocial factors, breast feeding practices, multiple parity at younger ages and other socioeconomic factors.^{14-17,5,11}

Certain health care system factors like access to care and quality of care have been associated with breast cancer disparities.¹⁸ Social factors like racism, low socioeconomic

status, lack of transportation and not having a primary care physician have also been documented as contributing to this disparity in survival rates, stage at diagnosis, and difference in treatment and mortality rates in black women.¹⁸⁻²⁷ Understanding disparities experienced by this population will help improve outcomes through targeting the identified roots of this issue.¹⁸ There are still many complex questions as to why black women are disproportionately affected by breast cancer.²⁸

The primary purpose of this study is to assess how race, health insurance coverage, income and education correlate with access to health care in women diagnosed with breast cancer in Kentucky. Is access to health care different among black women and women without private insurance with breast cancer? We anticipate that among these women, those who are black and those without private health insurance will report more barriers to services and differences in access to care than non-black women and privately insured women in Kentucky with breast cancer. Secondly, we will assess the relationship among these variables in women 40 or older that report not receiving guideline-recommended yearly mammogram screenings. We anticipate that black women and women without private health insurance outside mammography guidelines will report more barriers to service and difference in access to care than non-black women and privately insured women in Kentucky outside mammography guidelines. Lastly, we anticipate women that report lower yearly income and education level will have differences in access to health care.

Methods

Participants and Design

Data from the Kentucky Women's Health Registry (KWHR) from 2009-2011 was used for analyses. The KWHR is an observational cohort study begun in 2006 to assess health behaviors, disparities, issues, and health care access among Kentucky women aged 18 and older. Women from all counties in Kentucky are recruited to participate through non-probability convenience sampling techniques at health events, through KWHR partners, and by referrals from current participants. Health fairs, coalition meetings, illness support groups and lunch and learns at different organizations, work places or churches are common settings for recruitment. Recruited participants were asked to complete surveys online or by paper after giving their consent. Participants are then contacted in subsequent years via email or postal mail for follow-up. Surveys completed online are directly entered into the KWHR database and each participant maintains a specific user name and password. Each paper survey is given an identifier and entered into a database with the same identifier used for follow-up survey, and are then scanned to merge with the online surveys into the same database.²⁹

From 2006-2010 a total of 13,328 participants that have completed the survey, with 57% having at least one follow-up, 31% completing three surveys, and 6% completing a survey every year. New women are recruited every year to participate, with an annual recruitment goal of 1,500 with past participants being contacted every year for follow-up. The retention rate goal for first year follow up was set at 50% and 80% for participants with consecutive year follow-ups.²⁹ This study will be cross-sectional using measures of interest collected from most recent health surveys for women from 2009-2011. This study

was exempt from review by the Institutional Review Board at the University of Kentucky and KWHR has approved this study and the usage of de-identified data.

Measures

The self-report survey is approximately 40 pages long and is divided into 12 subgroups.²⁹ This study focuses on variables within the survey subgroups of demographics, general health, screenings and prevention, cancer and family history. All measures of interest are shown in detail in Appendix A. Socio-demographic measures of interest include race, type of health insurance, income and education. Cancer related measures included type of cancer diagnosed, mammography screening and behavior. For purposes of analysis the mammography screening variable was coded to represent the status of mammography compliance in accordance with the 2009 United States Preventative Task Force guidelines of yearly mammograms for women 40 and older.³⁰

An “Access Index” was computed to represent the outcome measure of health care access. Two Access Indices were created: One for women with breast cancer and another for women 40 or older not compliant with mammography guidelines. Variables included in the Access Index for the women *with breast cancer* are shown in Appendix B. The variables included in the Access Index for women outside mammography screening guidelines are the same, excluding the variable C1.1. This variable was excluded from the Access Index for this group of women because it is the same mammography variable used to define this group for analysis. Responses to index questions were coded so that higher response numbers equaled better scores on the access index, representing better access to health care services. The index variable measures were used from 2009-2011 due to omission of questions on previous years of survey data. The possible ranges of the

Access Index scores for women with breast cancer start from 0 to 13, and 0 to 12 for women outside mammography screening guidelines, with 13 and 12 representing the best health care access.

Framework

The Health Access index was built and modeled after the National Cancer Institute Patient Navigation Program framework of potential barriers to cancer care including financial, insurance, employment, child care, transportation and appointment scheduling issues.³¹ Reports of these barriers along with reports of use of low cost clinics, increased emergency room visits, and longer lengths of time since having a routine checkup have been associated with poor health care access and were also included to represent lower access to health care (Appendix B).^{32,33} Overall, the Health Access index was guided by the socio-ecological perspective, which emphasizes the interaction among and between multiple levels of a health issue and expands the view of possible determinants of health.^{34,35} Similar methods have been used that focused on barriers to access from an socio-ecological perspective.³⁶ This type of multi-level and theory guided approach is recommended by The National Cancer Institute to be used in research and practice.³⁵

Conceptual Model

Conceptually, the independent variables of race and health care insurance in women with breast cancer and in women outside mammography screening guidelines are associated with the outcome variables of the Access Index, with income and education levels acting as moderating variables (Figure 1).

Analysis

Two independent sample t-tests were performed to compare Health Access index scores among participants with breast cancer. The first test compared scores between black women and women of other race, and the second compared privately insured women with those without private insurance. Bivariate correlation was used to assess the relationship between income and scores on the Access Index. Scores on the Access Index were compared across participant's education levels (Less than High School, High School or GED, and greater than High School or GED) using a one-way ANOVA. A linear regression model was built to assess how race, insurance status, income and education predicted the variance in Access Index scores. These tests were repeated for all the participants in this sample aged 40 and older that reported not receiving guideline recommended yearly mammogram screenings. Analyses were performed using SPSS version 21.

Sampling Frame- see Figure 2

Results

The sample of women *with breast cancer* from the total 2006-2011 data were primarily white (only 3% black), 60 years of age or older (57%), privately insured (82%), well educated (86% greater than a high school diploma (HSD)), and reported income greater than 50,000 a year in 2011 (65%) (Table 1). The mean score on the Health Access Index for the 572 women with breast cancer from 2009-2011 was 12.5 (SD=0.84). The sample of women 40 years and older who reported *receiving less than guideline -recommended yearly mammography screenings* from the total 2006-2011 data were mostly white (2%

black), privately insured (80%), well educated (88% > HSD), and with income greater than 50,000 a year in 2011 (58%) (Table 1). The mean score on the Health Access Index for the 2009-2011 sample of 1,782 women was 11.3 (SD=1.28).

Results for Women with Breast Cancer

Among women with breast cancer from 2009-2011, there was no significant difference in scores on the access index between the 13 individuals defined as black compared to women defined as other. There was a significant difference in mean Access Index scores ($n=472$, $t(107)=3.02$, $p=0.002$ two-tailed) between women with breast cancer and with private insurance ($M=12.6$, $SD=.73$) and women with breast cancer without private insurance ($M=12.2$, $SD=1.22$). There was a small positive correlation between income and health index scores ($r_s=0.234$), with higher levels of income associated with higher scores on the access index ($p<0.01$ two-tailed)(Figure 3.1). There was also a significant difference in mean scores between education levels in this group of women ($F(2, 562)=3.3$, $p=0.035$) (Table 2.1). Post –hoc comparisons using Tukey HSD indicated that mean scores on the access index among participants with less than a high school degree were significantly different than the other two groups (Table 2.1& Figure 4.1). For purposes of regression analysis, education categories were dummy coded (less than high school =1, other two levels=0) due to the results from the previous ANOVA. In the first model of race, insurance, income and education only 5% of the total variation in the Access Index could be explained by these predictor variables ($R^2=0.048$) (Table 3.1). Only income ($B=0.07$, $p<0.05$) and insurance status ($B=0.24$, $p<0.05$) contributed significantly to scores on the Access Index. For each increase in the level of income,

scores on the Access Index increased by 0.07, and for reports of having private insurance Access Index scores increased by 0.24.

Results for women outside mammogram screening guidelines

In women not receiving yearly mammography screenings, there was not a significant difference in mean scores on the Access Index for participants that were black versus another race. Privately insured women in this group had a significantly higher mean score on the Access Index (M=11.3,SD=1.02) compared to women without private insurance (M=10.25,SD=1.9) (n=1,478, t(338)=9.05p=.002 two-tailed). There was a medium positive correlation between income and scores on the access index ($r_s=0.300$), with higher levels of income associated with higher scores on the access index (p<0.01 two-tailed) (Figure 3.2). There was a significant difference in mean scores among education levels in this group of women (F(2, 1,741)=31.3,p<0.000) (Table 2.2). The post- hoc Tukey HSD indicated that the mean scores on the access index among participants in all three groups were significantly different from one another (Table 2.2 & Figure 4.2). In the second linear regression model of race, insurance, income and education, 16% of the total variation in the Access Index could be explained by these predictor variables ($R^2=0.16$) (Table 3.2). Only income (B=0.21, p<0.01) and insurance status (B=0.37, p<0.01) contributed significantly to scores on the Access Index. For each increase in the level of income, scores on the Access Index increased by 0.21, and for reports of having private insurance Access Index scores increased by 0.37.

Discussion

This study found no significant differences among Access Index scores among black women with breast cancer, which was unexpected and not concurrent with the literature. In the KWHR there were only 21 black women with breast cancer (Table 1), and only 13 women from 2009-2011 used in the analysis, comprising about 2 percent of the sample of women with breast cancer from 2009-2011. This small sample may have negatively influenced statistical power, and the ability to detect significant differences and overall external validity. According to the Kentucky Cancer Registry from 2009-2011 there were 787 new cases of breast cancer among black women in Kentucky, about 7% of new cases of breast cancer.³⁷ The most current number of participants in KWHR are primarily white (93%), older than 45 (48%), more than half of the women have a bachelor's or graduate degree (55.5%), and are employed (67%).²⁹ Given the documented disparities in breast cancer mortality and outcomes in black women, recruitment efforts of the KWHR should focus on increasing enrollment of women from diverse backgrounds. As a result, the KWHR would allow for more representative future research, contributing to a better understanding of the state population of women with breast cancer.

Women *without* private insurance had significantly lower access to health care as measured by the Access Index. This held true for women with breast cancer and those who were not current with mammography screening guidelines. These differences may represent a lack of adequate transportation to a physician's appointment, financial barriers to care, a problem with coordinating childcare, longer times between routine checkups or lack of a regular source of care. This is important when considering public health approaches and interventions for this population. Insurance status, which was also

significant when controlling for other variables, may have implications for future research, program evaluation, and future policy due to the current enrollment in Kentucky's new health benefits exchange. The most current numbers as of April 2014 report a total of 322,827 individuals enrolled in Medicaid services along with 79,580 individuals having purchased private insurance in Kentucky.³⁸ This increase in the Kentucky population having a source of health insurance coverage may have positive implications for individuals with breast cancer or lack of mammography screening and health care access issues. Also, with expansion of Medicaid more women could qualify for the Kentucky Breast and Cervical Cancer Treatment Program, which facilitates cervical and breast cancer screening and treatments, possibly eliminating barriers to screening and treatment among women in Kentucky.³⁹ Since there were differences among women privately insured, policy makers and government leaders should compare access and quality of care between Medicaid services and services provided by private insurance.

Higher income was significantly correlated with higher Access Index scores. The most current screening numbers from the CDC indicate that there were equivalent breast cancer screening utilization rates (73%) in 2010 between black and white women in the United States.⁴⁰ With these reported equivalent usage rates of screening, delay in proper diagnosis and treatment has been documented as accounting for the increased mortality rates especially among low income and black women.⁴¹⁻⁴⁹ Since income was significantly correlated with scores on the Access Index scores, even when controlling for the other variables, this may play a role in receiving and having access to prompt cancer diagnosis and treatment. This also could have implications for black women, because out of all

other races of women, they compose the highest percentage of women living in poverty in Kentucky (34%).⁵⁰

Access to care was significantly different between education levels, with Access Index scores higher with increasing educational attainment. Differences between *all* groups, not just the lowest and highest levels of education, is important when considering public health programs or initiatives. The impact of these differences among educational levels, and other social factors like income, follow a step-wise gradient pattern with health outcomes incrementally improving as education levels and income increases.⁵¹⁻⁵⁴ This gradient is important when considering research, policy formation, and preventative efforts. The National Institute of Health has called for an increase in priority and need of health disparities research focusing on social determinants of health and more community participatory research to help address these incremental differences.⁵⁵

Women outside mammography guidelines had a greater R^2 , so the variables of race, insurance, income and education contributed more to the variance in Access Index scores, in the linear regression model when compared to the model of women with breast cancer. These determinants of access to care could be a bigger issue for women to get into screening versus breast cancer treatment. There are current programs in Kentucky that help women connect with screening services, cancer treatment, and financial support groups. One such organization is the Kentucky Pink Connection, which utilizes patient navigators to address typical barriers to screening, diagnosis and treatment including childcare, transportation, financial and insurance issues.⁵⁶ The County Health Extension through the Cooperative Extension System in Kentucky also help women through utilizing patient navigators or community health workers to address typical barriers to

screening.⁵⁷⁻⁵⁸ These results support increased attention to policy and funding priority to programs like the Kentucky Pink Connection and the use of County Health Extension agents in Kentucky. This could potentially help more women, especially low-income women, receive appropriate and guideline recommended mammography screening and linkage to cancer treatment and care.

The limitations of this study include selection bias, which inhibited the ability in gaining an adequate picture of the true population of women in Kentucky with breast cancer. However, even if there were more women from different backgrounds recruited to participate, KWHR data was collected using non-probability techniques, which further limits external validity. Also, recall bias is also a possibility and a threat to internal validity with regard to measurement of the variables used for the Access Index (Appendix B). Another limitation is how income was measured using non-mutually exclusive categories, with possible miscalculation of actual income, which may be limiting when interpreting significant results related to income (Appendix A). In regards to the index that was built to represent health care access, answers to the questions by participants may not be specific to the health care access in regard to their breast cancer. Also, each variable used to compose the Access Index may not equally contribute to differences in the scores. For example, certain barriers to care like financial issues may not equally contribute to access to care the same as not being able to find childcare. Although, with these limitations the strengths of this study include the variables used in the Access Index. Most women in this sample were white, privately insured, with higher income and education levels. As one would expect given the majority makeup of the

sample, the overall mean Access Index scores were high. Overall, the variables used to build the index were sound and representative of common barriers to care.

Conclusion

Since the 1990's there have been significant developments and innovations in breast cancer screenings and treatment.⁵⁹ Many have argued this increase in ability to successfully control and treat breast cancer has actually widened the disparity among black women and individuals of low income and insurance status, due to the unequal access to these improved services.⁵⁹⁻⁶³ When addressing cancer control measures, public health practitioners must simultaneously account for the potential health disparities that may arise and ensure access to these benefits are equitably distributed.⁵⁹ Additional research is needed to examine the possible reasons and root causes of breast cancer inequities experienced by not only black women, but women from different socioeconomic backgrounds in Kentucky.

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Figure 1. Conceptual Model

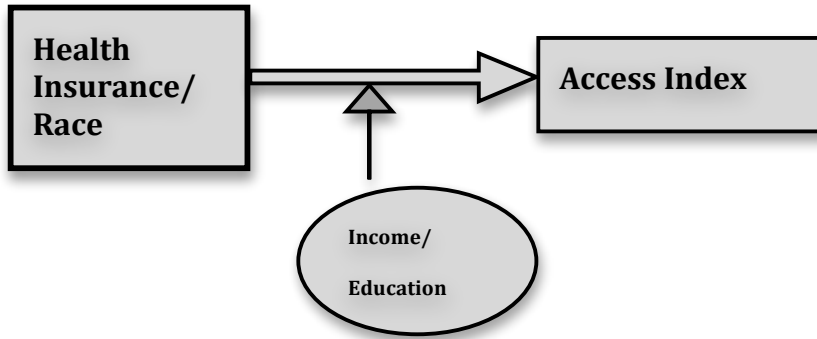


Figure 2. Sampling Frame

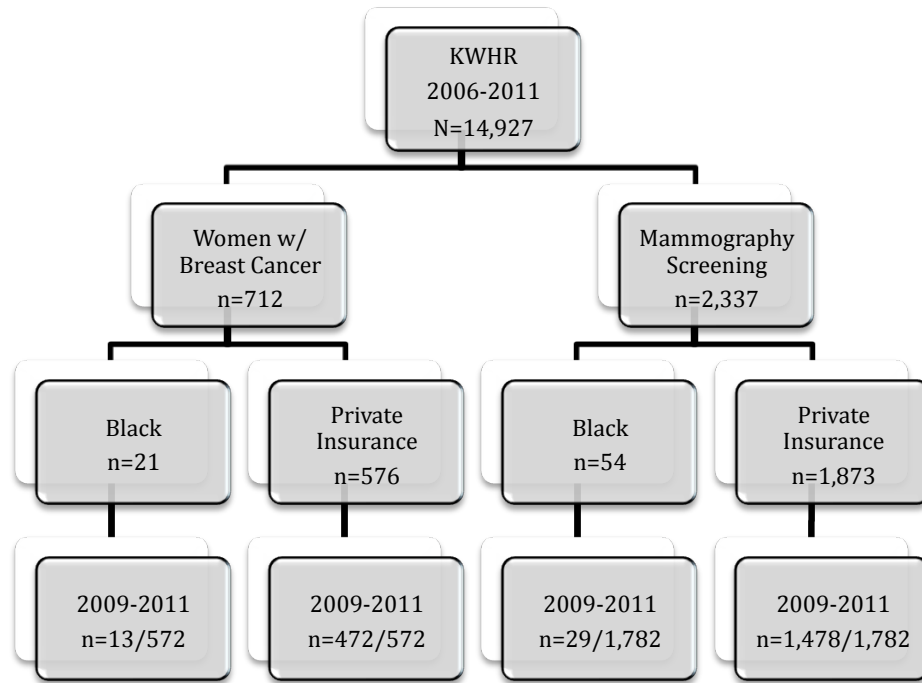


Figure 3.1 Correlation Among Participants with Breast Cancer between Access Index Scores and Income

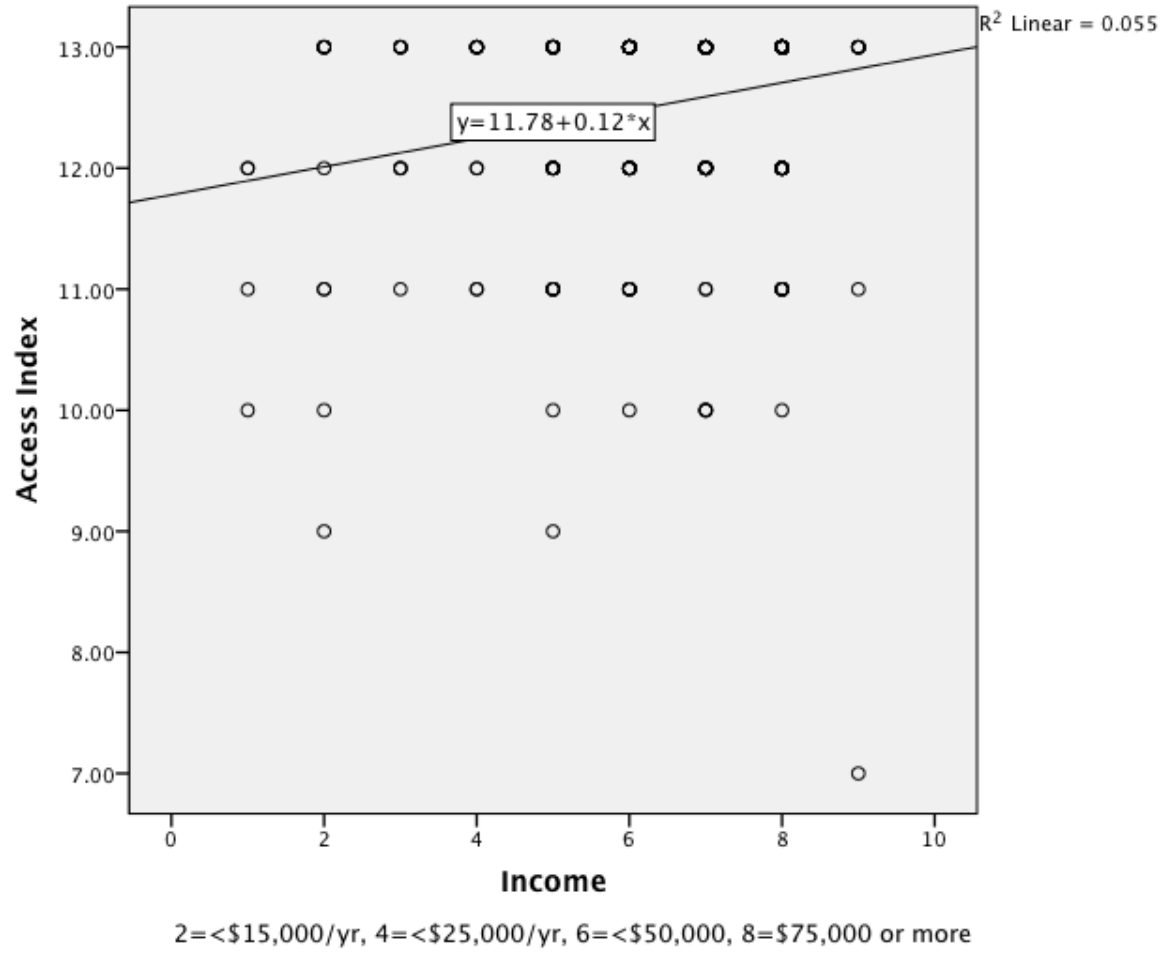
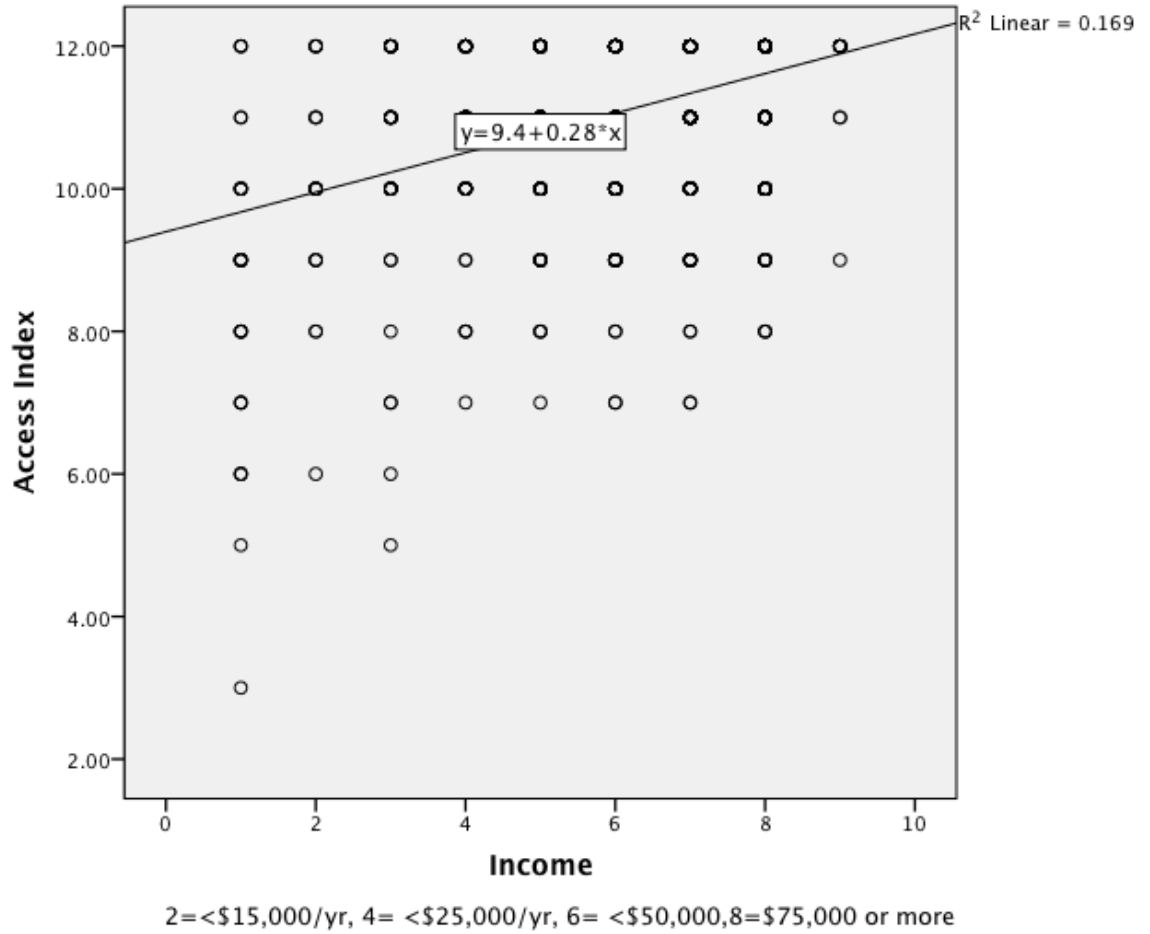
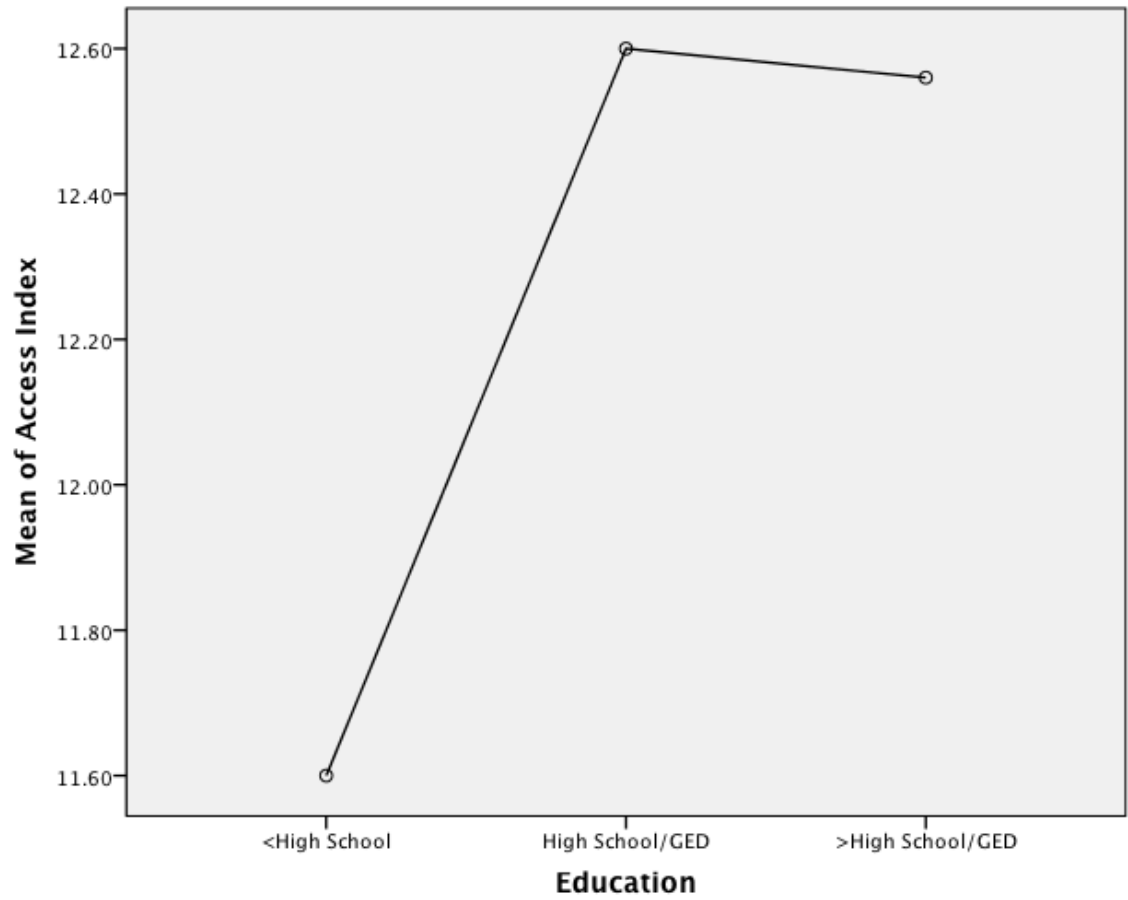


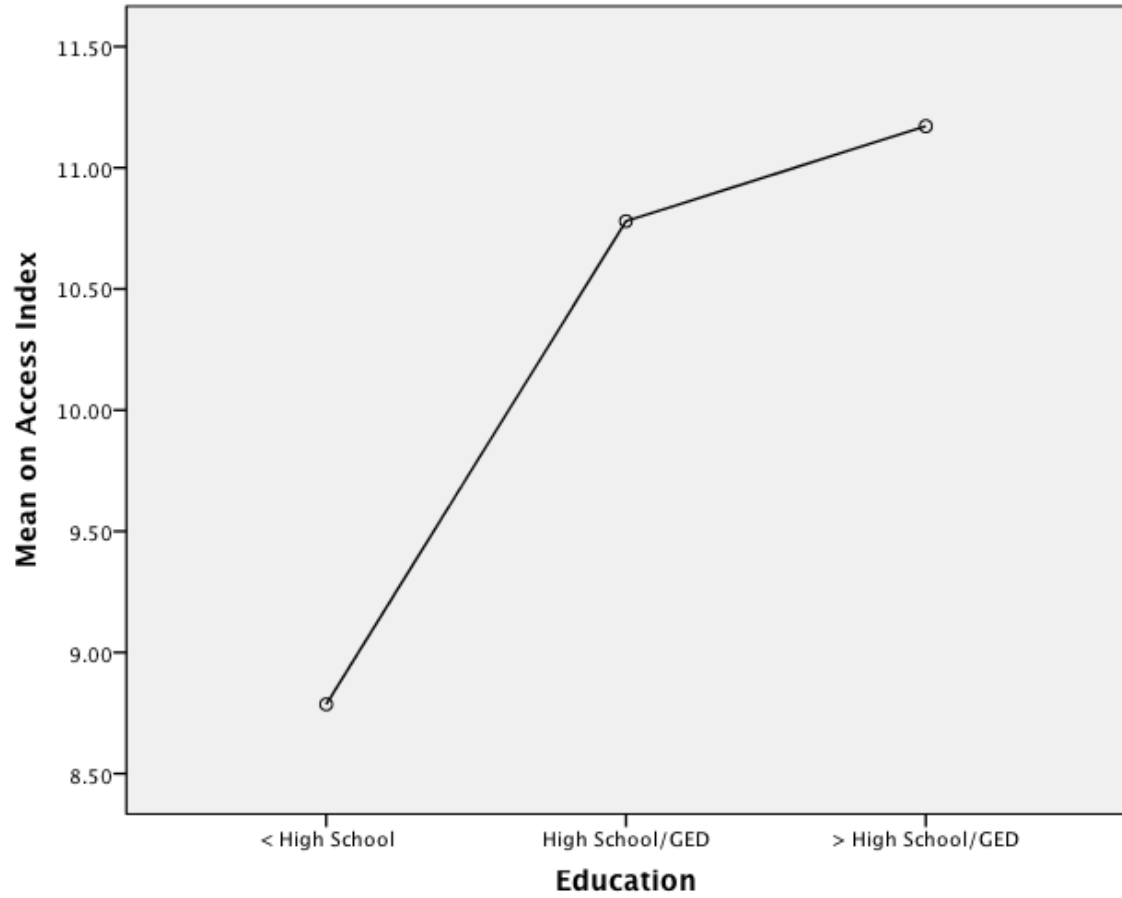
Figure 3.2 Correlation Among Participants ≥ 40 and Outside Mammogram Guidelines between Access Index Scores and Income



**Figure 4.1 Tukey HSD Mean Differences between Education Levels
In Women with Breast Cancer**



**Figure 4.2 Tukey HSD Mean Differences between Education Levels
In Participants ≥ 40 and Outside Mammogram Requirements**



**Table 1. Characteristics of participants
With Breast Cancer and ≥ 40 and Outside Mammography Guidelines
in the KWHR from 2006-2011**

Characteristics	Breast Cancer (n=712)	Mammography Screening (n=2,377)
Mammography- N (%)		
Yearly		7,689 (77)
Less Often/Never		2,337 (23)
Race- N (%)		
Black	21 (3)	54 (2)
Other	687 (97)	2,269 (98)
Age- N (%)		All ≥ 40
18-45	37 (5.2)	
45-60	266 (37.4)	
> 60	409 (57.4)	
Education- N (%)		
<High School Diploma	6 (0.9)	32 (1)
High School Diploma/GED	86 (12.3)	252 (11)
> High School Diploma	609 (85.5)	2,007 (88)
Insurance -N (%)		
Private (HMO/PPO)	576 (82.3)	1,873 (80)
Public (Medicaid)	15 (2.1)	52 (2)
Uninsured	15 (2.1)	245 (2)
Income (2011) -N (%)	n=413	n=1,202
<20,000/yr	25 (6.1)	112 (5)
20-50,000/yr	118 (28.6)	389 (17)
>50,000/yr	270 (65.4)	699 (58)
Access Index Score (2009-2011)- Mean (SD)	n=572	n=1,782
	12.5 (0.84)	11.3 (1.28)

Table 2.1 ANOVA Among women with Breast Cancer Access Index Scores and Education

Source	Sum of squares	Degrees of freedom	Mean square	F statistic	Significance
Between Groups	4.7	2	2.35	3.341	0.036
Within Groups	394.8	562	0.696		
Total	399.4	564			Eta ² =0.01

Tukey HSD

Group	Mean Diff	Std Error	Sig.	95 % Confidence Interval	
				Lower	Upper
1) <High School(HS)	2) -1.00*	0.390	0.029	-1.92	-0.083
	3) -0.96*	0.376	0.030	-1.84	-0.075
2) HS/GED	1) 1.0*	0.390	0.029	.083	1.92
	3) 0.04	0.115	0.935	-0.229	0.309
3) >HS/GED	1) 0.96*	0.377	0.030	0.075	1.84
	2) -0.04	0.114	0.935	-0.309	0.229

**Mean Difference is significant at p < .05.*

Table 2.2 ANOVA Among Women ≥ 40 Outside Mammogram Guidelines between Access Index Scores and Education

Source	Sum of squares	Degrees of freedom	Mean square	F statistic	Significance
Between Groups	99.838	2	49.9	31.3	.000
Within Groups	2775.22	1741	1.59		
Total	2875.06	1743			Eta ² =0.035

TUKEY HSD

Group	Mean Diff	Std Error	Sig.	95 % Confidence Interval	
				Lower	Upper
1) <High School(HS)	2) -1.99*	0.351	.000	-2.81	-1.17
	3) 2.38*	0.338	.000	-3.18	-1.59
2) HS/GED	1) 1.99*	0.351	.000	.117	2.81
	3) -0.39*	0.102	.0004	-0.643	-0.151
3) >HS/GED	1) 2.38*	0.388	.000	1.59	3.18
	2) 0.39*	0.102	.0004	0.151	0.632

**Mean Difference is significant at $p < .05$.*

Table 3.1. Multiple Linear Regression Among Women with Breast Cancer and Access Index

Variable	Coefficient	95%CI	p value
Constant	9.967	9.63, 10.3	0.001
Race	-0.380	-0.95, 0.19	0.19
Insurance	0.24	0.22, 0.45	0.03
Income	0.07	0.16, 0.11	0.01
Education	0.07	-0.19,0.33	0.59
Model fit: R² = .048			

Table 3.2. Multiple Linear Regression Among Participants ≥ 40 and Outside Mammogram Guidelines and Access Index

Variable	Coefficient	95%CI	p value
Constant	7.49	7.2, 7.7	0.001
Race	0.16	-0.36, 0.69	0.54
Insurance	0.37	.187, 0.55	0.001
Income	0.21	.175, 0.26	0.001
Education	0.17	-0.46, 0.38	0.12
Model fit: $R^2 = .159$			

Appendix A. KWHR Questions-Measures of Interest

<p>Socio-demographic</p>	<p>B22. What type of medical insurance do you have? CHOOSE ALL THAT APPLY: Private insurance / HMO/ PPO Medicaid Medicare VA / Tricare Do not have insurance Do not know Choose not to answer</p>
	<p>B21. What is your highest level of education? CHOOSE ONLY ONE: Less than high school Some high school High School Diploma GED Some college Vocational or technical certificate or degree Associates degree Bachelor degree Post graduate training Other: Choose not to answer</p>
	<p>X4. Family income can influence your stress, your emotional and physical health. Is your annual household income from all sources: Less than \$10,000 Less than \$15,000 Less than \$20,000 Less than \$25,000 Less than \$35,000 Less than \$50,000 Less than \$75,000 \$75,000 or more Don't know / Not sure Choose not to answer</p>
<p>Cancer</p>	<p>F1. Have you ever had any of the following types of cancer? CHOOSE ALL THAT APPLY Anal, Bladder, Bone, Brain, Breast, Cervical, Colorectal (cancer of either the colon or rectum) Endometrial, Esophageal Head (not brain), neck, oral cavity (mouth)tumors ,Kidney Leukemia, Liver, Lung, Lymphoma, Multiple myeloma, Ovarian, Pancreatic, Skin (Melanoma), Skin (Non-Melanoma), Stomach, Thyroid, Uterine, Vulvar, Other: _____</p>
	<p>C1.1 Have you ever had any of the following screening tests? Yearly or More often ,Less often, Never ,Don't know /Choose not to answer: Routine mammogram,pap smear, colorectal cancer screening, Sigmoidoscopy/colonoscopy, blood pressure,diabetes testing cholesterol screening,chlamydia testing</p>

Appendix B. The KWHR Access Index Variables

<p>ACCESS INDEX</p>	<p>C1.1 Have you ever had any of the following screening tests? Yearly or More often ,Less often, Never ,Don't know /Choose not to answer: Routine mammogram,Pap Smear,Colorectal cancer screening, SigmoidoscopyColonoscopy, Blood pressure,Diabetes testing Cholesterol screening,Chlamydia testing</p>
	<p>C9. In the past 12 months, how many times have you been to the emergency room? 0 1-4 5-10 More than 10 Choose not to answer</p>
	<p>C11. How long has it been since you last visited a doctor for a <u>routine checkup</u>? Less than 1 year ago 1-2 years ago 3-5 years ago More than 5 years ago Never Do not know / Choose not to answer</p>
	<p>C12. How do you get to your doctor appointments? Use your car / truck Use public transportation Get a ride Other: _____ Don't go to a doctor Choose not to answer</p>
	<p>C13. What type of provider do you use for the majority of your medical care? Public or low cost clinic Private Physician / Private Clinic Emergency Room or other acute care facility No regular source for care Choose not to answer</p>
	<p>C13a. Below is a list of problems that some women can have getting health care. Please consider the provider that you use for the majority of your care as you answer the questions below. We are interested in knowing if you have experienced any of these things. Yes, No, Don't know / Choose not to answer I couldn't get an appointment when I wanted one I didn't have enough money to pay the co-pay / cost of visit I had transportation problems I had a childcare problem I felt too sick / too tired to go</p>

BIOSKETCH

Full Name: Sarah Elizabeth Yeiser
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Phone: (859) 338-4783
Email: syeiser1@gmail.com

Sarah received her Bachelors of Science in Nursing from Thomas More College in 2010. She has worked at the University of Kentucky Good Samaritan Hospital as a registered nurse since 2010 and currently holds a Registered Nurse License in Kentucky. She also became provisionally Certified in Public Health as of April 2014. Sarah will graduate May 2014 with her Masters in Public Health.

ACKNOWLEDGEMENTS

Thanks to:

Dr. Kate Eddens for her guidance and invaluable feedback through out the whole capstone process.

Dr. Tina Studts for her help with the statistical analysis portion of the manuscript.

Dr. Linda Alexander for her input in the development of my discussion section and participating on my capstone committee.

Dr. Swanson for participating on my capstone committee.

Robert Shapiro UK College of Public Health Librarian for his help during the literature review process.

Kentucky Women's Health Registry for allowing the usage of their data set.

UKHealthCare.

January 24, 2014

Office of Research Integrity
Kinkaid Hall

RE: Sarah Yeiser's IRB proposal entitled: "Health Care Insurance and Access and Breast Cancer in Black Women in Kentucky"

To Whom It May Concern:

Sarah Yeiser has received approval to receive de-identified data from the Kentucky Women's Health Registry to use for analysis in the above mentioned proposal. Ms. Yeiser under no circumstances will be given any identifying information about the subject data that is provided to her for her project.

If you have any further questions, please feel free to contact me at majohn@uky.edu or by phone 323 1377.

Thank you.

Sincerely,



Mary Johnson, CCRP
Clinical Research Administrator
Coordinator Kentucky Womens Health Registry
Department of Internal Medicine
Division of Rheumatology
Kentucky Clinic, Room J513



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IRB Review

TO: Sarah Yeiser
College of Public Health
352 Bowman Hall
Speed Sort 0059

FROM: Chairperson / Vice Chairperson / Office of Research Integrity
Institutional Review Board

SUBJECT: IRB Review

DATE: February 13, 2014

IRB
2/13/14

On February 11, 2013, the Institutional Review Board (IRB) reviewed your project titled, *Health Care Insurance & Access & Breast Cancer in Black Women in Kentucky*.

The IRB determined that your proposal does not meet the Department of Health and Human Services (DHHS) definition of human subjects and thus does not require IRB review. The IRB made this determination because:

- You are receiving existing de-identified data;
- The data will not allow subjects to be identified;
- You will not receive a code/link to re-identify subjects;
- Study personnel cannot identify subjects; and
- The data were not collected specifically for your project;

Although your project does not need IRB review, please call the Office of Research Integrity before making any changes to your project because some changes may make the project eligible for IRB review.

If you have any questions regarding the IRB's decision or if any the information listed above are incorrect, please give the Office of Research Integrity a call at 859-257-9084.

