tulsa photovoice

a participatory action research project

a report submitted to the Tulsa Area Community Schools Initiative
and the University of Oklahoma School of Community Medicine

photovoice

Tulsa Photovoice: A Participatory Action Research Project

Report Submitted to:

TACSI
Tulsa Area Community Schools Initiative

OU School of Community Medicine

photovoice

Tulsa Photovoice: A Participatory Action Research Project

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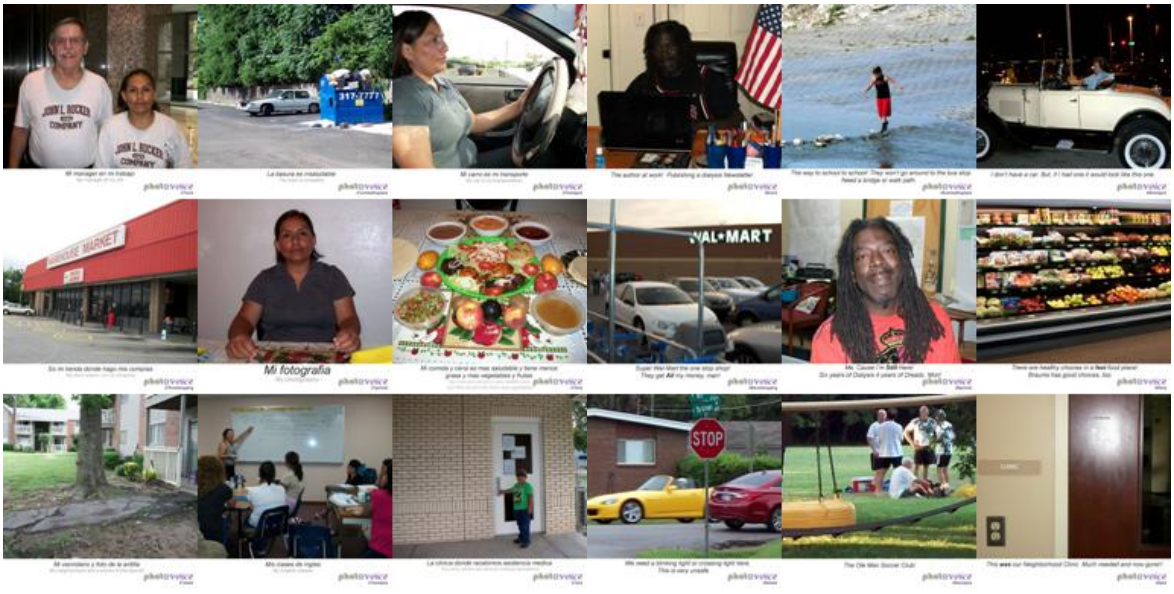
Figure 1: Examples of Photovoice Photographs



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Introduction

Over the past two decades, medical schools across the country have been urged to examine their social mission in preparing new physicians to provide healthcare for the entire population. Recent research has revealed dramatic increases in medical illnesses and decreases in life expectancy in communities with poor access to healthcare facilities and medical providers. Institutions of higher education have embraced the civic engagement movement by underscoring how important it is that academic institutions and health centers work to reduce the barriers faced by vulnerable populations in accessing quality healthcare.

The State of Oklahoma ranks the worst among the 50 states on most major studies of healthcare outcomes, access and quality. Disparities in access to healthcare exist in the city of Tulsa, where access to providers is concentrated in the south Tulsa area, in vast contrast to north and west Tulsa. Not surprisingly, these areas with less access also have some of the worst healthcare outcomes in the state. In north Tulsa, current data shows that the life expectancy is 14 years less than for those living in south Tulsa.

In order to address the drastic shortages of healthcare providers in vulnerable communities, the growing numbers of uninsured, declining access to quality healthcare for many Oklahomans, and widening disparity of health outcomes among privileged and underprivileged communities, the George Kaiser Family Foundation bestowed a transformational gift of $50 million dollars to establish the OU-Tulsa School of Community Medicine in 2008. Key features of the donation included funding for endowed chairs, student educational grants, and the OU-Tulsa School of Community Medicine Summer Institute. Consistent with this mission, the School of Community Medicine and OU-Tulsa have undertaken a transformative effort to align its educational programs, clinical service, research, and outreach in support of this ambitious mission. Various research, community service, and curriculum development initiatives have coalesced into a framework for community health development and research involving several schools within OU-Tulsa. Specifically, these include the development of an approach that integrates basic social research, applied social research, intervention research, and community collaboration to advance community health within some of the most at-risk and vulnerable communities in the United States.

One of the hallmarks of the School of Community Medicine (SCM) has been the Summer Institute (SI), a weeklong immersive experience. SI participants include a broad group of students and faculty from across the health sciences professions and other university disciplines, such as social work and urban design. The student participants engage in an innovative curriculum of reflective service learning and action research activities designed to promulgate the principles and practices of community medicine. Unlike other academic courses, the SI is an experiential immersion that captures the tacit knowledge that the community has about its needs and its vision for a healthier future. Instead of just listening to lectures, students are engaged in hands-on activities that encourage voice, group problem solving, and critical thinking. SI participants interact with patients in chronic care clinics, experience direct, in-depth and one-on-one interaction with university faculty members, interview community agency workers who treat the vulnerable, and develop a comprehensive understanding of community medicine. It is in this context that the Photovoice (PV) project emerged and was conducted.

PV is a participatory action research model that enables people to identify, represent, and enhance their communities through photographs and stories. PV differs from traditional studies by investigating an issue or issues from the perspective of the people who have experience with the issue, capturing their local knowledge. As opposed to only gathering and analyzing data, PV makes explicit the facilitators' and participants' focus on improving the lives and health of the communities in which they live (Wang, 1999). It joins participants and researchers as equal partners. In this way, participants become colleagues of the researchers, offering their expertise and knowledge about how best to work toward solving complex issues such as increasing access to healthcare and improving their surrounding communities.

Defining Community-Based Participatory Research & Photovoice

The elimination of salient health disparities requires the commitment on the part of all researchers and educators to be informed of alternative models of research participation. With an overemphasis on individual change models and increasingly disparate health outcomes between communities, it has become increasingly apparent that much of the research conducted on health behavior is missing the mark. Traditional research emphasizes an "expert" or "objective observer" approach. Such research facilitates an "us" versus "them" environment that further silos relevant research findings from communities that could benefit from a more collaborative process. The complexity of community health requires ownership and real partnerships between the researcher and the community. Although there has been some success in increasing minority participation in clinical research, these efforts have not been widely successful, likely due to a top-down approach that often lacks cultural competence. Evidence suggests that participatory approaches have the potential to transform the health of communities because they get to the crux of the problems through the more direct and equitable participation of community members (Brownson,et al.,1998; Levine et al., 1994; Grinstead, et al.,1999).

Some postulate that traditional research methodologies fail to elicit useful information because they conduct research "on" instead of "with" communities. Such methodologies were used historically to examine public health and community issues (e.g. Jane Addams and Hull House Maps and Papers), where the melding of researchers, workers in the field, and community members created an environment of collaboration, mutual respect, and knowledge sharing (Finn, 1994). Similarly, CPBR approaches are place-bound where the lab is the community, and community partners have both stake and say in all elements of the research from problem selection to research design, implementation, analysis, and dissemination. Within this model the relationship between partners is long term, and equal partners engage in the process of research with a goal of fostering community change and development. Some selected principles of community-based research include the following:

> The community is recognized as a unit of identity.
> The focus is on strengths and resilience as opposed to pathology.
> Research is conducted in a non-hierarchical and collaborative endeavor that strives to involve and inform all constituents at all phases of the research.
> A process for co-learning and empowerment is facilitated.
> Attention is paid to inequities (community partners have real leverage in the project).
> The multiple determinants of health are considered.
> Community members have a role in the research whenever possible.
> Widespread dissemination of results is emphasized.
> The ultimate product of the research provides community benefit

(Israel, Schulz, Parker, & Becker, 1998; Hatch, Moss, Saran, Presley-Cantrell, & Mallory, 1993; Crucetti, 2000).

Photovoice has been used in places around the world to tell stories through photos in order to build a greater understanding of what people are experiencing. The purpose of Photovoice is to gain insight into how people's lives and ways of living affect their well-being.

Based on the theoretical literature on education for critical consciousness and feminist theory, participatory action research methods such as Photovoice encourage collaboration between those with status and power and those without and can lead to lasting social change (Wang, 1999). The benefits of this type of research to participants, researcher, and communities are well documented in the literature (Feen-Calligen, Washington, & Moxley, 2009; Wang, 1999; Wang, Morrel-Samuels, Hutchinson, Bell, and Pestronk, 2004; Wang &Pies, 2004). By understanding the main goals of Photovoice and concepts of how to apply this technology, researchers and participants are able to effectively shape social policy in ways that benefit underrepresented populations.

Photovoice differs from traditional studies by investigating an issue from the perspective of people who have experience with the issue, capturing their local knowledge (Feen-Calligen, et al., 2009; Wang, et al., 2004). It joins participants and researchers as equal partners, creating a paradigm shift by giving power to the disenfranchised (Feen-Calligen, et al., 2009; Wang, et al., 2004).

Photovoice enables people to record and reflect their communities' strengths and concerns, promote dialogue and knowledge about personal and community issues through large and small group discussions of their photographs, and to reach policy makers (Wang, 1999). Each of these goals serves to empower the participants, increasing the likelihood of their involvement in political action, which, in turn, reflects the commitment of PAR to social change. In order to reach these goals, planners and researchers have the responsibility of involving policy makers and other influential people early on, insuring that those who have the power to create change are involved in the experience from the beginning (Wang, 1999). Photovoice was used to demonstrate the needs of rural women in China, leading policy makers to build daycare centers, initiate midwifery programs, and set up scholarships Wang, Kun Yi, Wen Tao, & Carovano, 1998). As a participatory action research model, Photovoice is effective in giving a voice to those who have been oppressed, building coalitions between citizens, researchers, and lawmakers, and changing social policy to reflect the community's agenda rather than the researchers needs (Wang, et al., 1998).

Establishing Partnerships

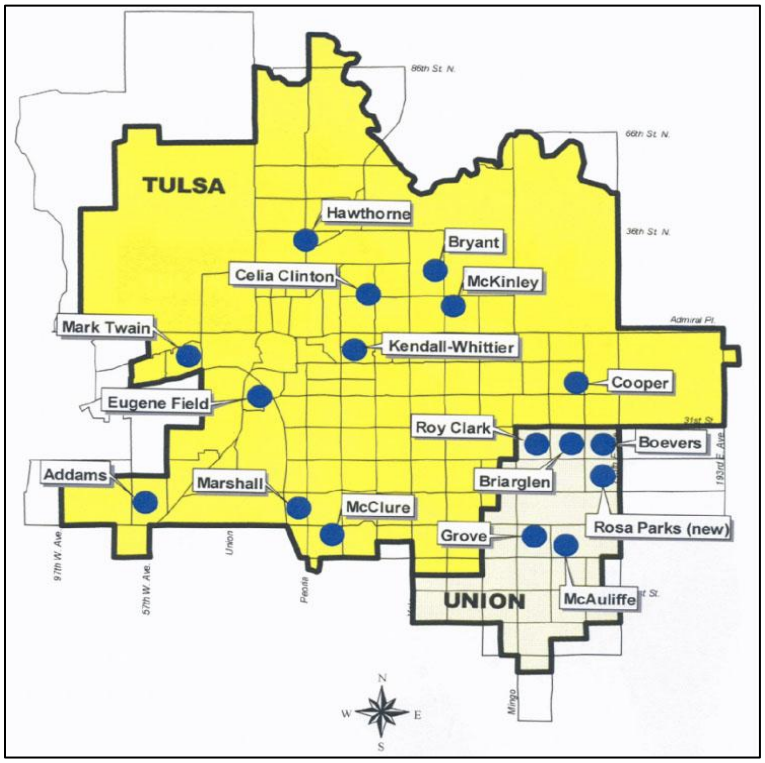
The Tulsa PV project involved collaboration among OU-Tulsa School of Community Medicine (SCM), the Tulsa Area Community Schools Initiative (TACSI), faculty members from the Anne & Henry Zarrow School of Social Work, the Urban Design Studio, and the OU-Tulsa Library. TACSI includes 18 community elementary schools widely distributed across the city of Tulsa and two public school districts, Tulsa and Union Public Schools.

The OU-Tulsa Urban Design Studio previously collaborated with TACSI on Neighborhood Planning Academies, which trained teachers to facilitate neighborhood meetings and develop action plans for their neighborhoods. Therefore, the TACSI site coordinators were identified as perfect facilitators of this project and who could work with community residents interested in participating in the project. To gauge interest, members of the research team attended several TACSI meetings to explain the project and to invite participation. A time line and list of project commitments were outlined by the research team.

Research team members also met extensively with the OU-SCM to plan implementation of the project during the 2009 Summer Institute. As noted previously, the Summer Institute (SI) is a week-long immersion in community medicine. The SI uses innovative educational methods, including trans-generational and interdisciplinary teamwork experiences in collaborative problem solving, involving students across the health professions, resident physicians, and a trans-disciplinary faculty. OU-SCM has conducted an annual SI since 2008, making incremental modifications each year. Through planning meetings during the spring of 2010, it was decided jointly by OU-SCM and the research team to integrate Photovoice into the 2010 SI. Participants would be interviewed by interdisciplinary groups of students and faculty, photos taken by participants would be displayed during the Summer Institute, and Photovoice participants would be invited to the final luncheon of the week-long institute.

Once TACSI and the SCM agreed to participate, members of the research team began planning with school coordinators and planned a training meeting for coordinators. Almost simultaneously, preparation meetings were conducted with the SCM and the organizers of the Summer Institute. Coordination demands were high, as the PV interviews would involve organizing over 200 individuals at multiple sites in a single day complete the project. That number includes TACSI site coordinators, faculty and staff, students, and participants, who each had different roles in the process, including consenting, training, data collection, interviewing, etc. In the end, 53 individuals from 14 TACSI schools agreed to participate in the PV project.

Figure 2: Map of Community Schools



The objectives of the Tulsa (PV) project were broad and varied due to the multiple constituencies. Objectives included:

> The collection and analysis of qualitative data, both visual and oral, from a geographically distributed sample of Tulsa residents that will reflect their attitudes,

perceptions, and behaviors about their communities, particularly those that may be related to health outcomes.
Provide community residents the opportunity to examine and speak directly about their experiences living within their communities.
Provide opportunities for faculty, students, and staff participating in the OU School of Community Medicine Summer Institute to meet with community residents and learn more about their communities through direct experience in a research project.
Involve teachers and school site coordinators at community schools in a qualitative research study as assistant investigators.
Document and share the information collected with all the institute participants, the scholarly community, and the public.

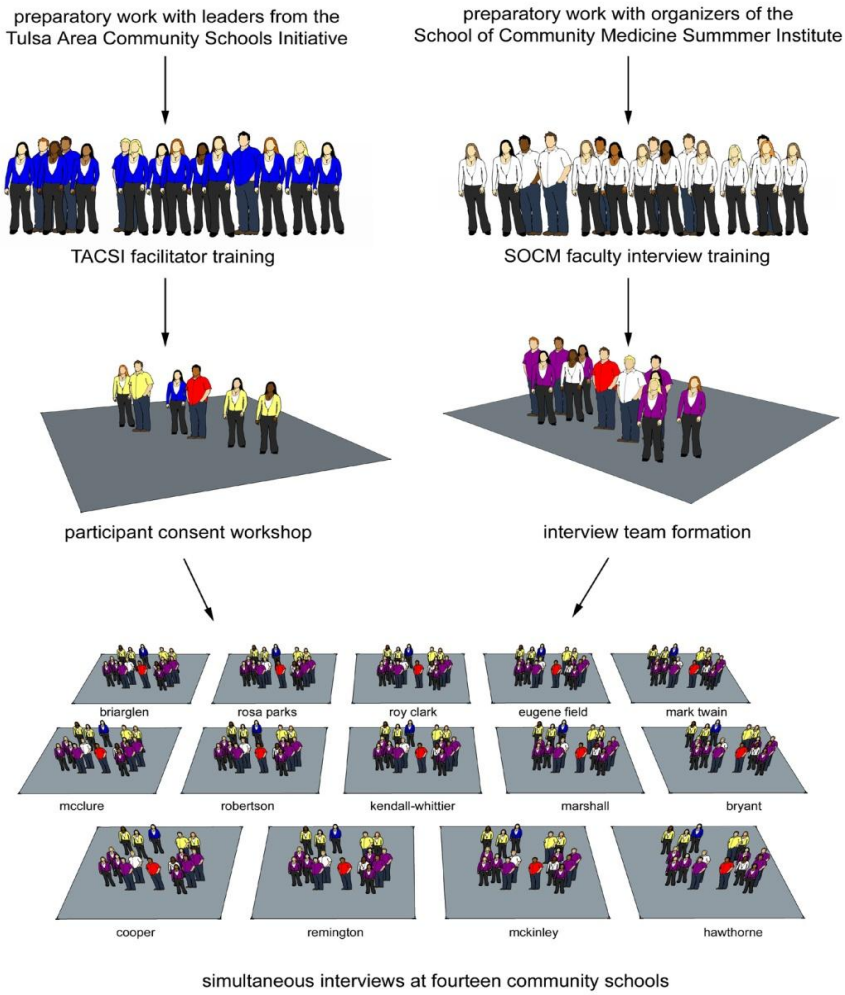
Logistics and Training

This project involved collaborating with multiple partners and intensive coordination. Preparatory work with both TACSI and OU SCM involved multiple orientations, trainings, and meetings. Figure 3 below illustrates the organizational details of this project.

Working with OU-School of Community Medicine

In addition to the multiple planning meetings that research team members attended during the spring of 2009, the research team also developed training for the faculty members who would participate in the SI. In July 2009, detailed training was provided to the faculty which included basic information about Photovoice and community-based research, the photos the participants would be presenting, and interviewer training. Faculty members and students were also consented to participate in the study as the interviews would be audio recorded. Also faculty and students were surveyed about their impressions of the Photovoice project.

Figure 3: Research Process



Working with TACSI and Participants

The TACSI site coordinators and teachers were trained by the OU Tulsa Photovoice research team, as they were the point of contact for the participants in the study and acted as facilitators. Participants from the Neighborhood Planning Academy, neighborhood association members, and parents with children from the participating schools were invited to an information session facilitated by the site coordinators and teachers to explain the project and the sponsors' expectations of the participants' involvement. Two community residents were recruited from each site to volunteer for the study, which provided a total of 53 participants. The participants agreed to come to two 1-hour training sessions, take photographs, and return for a 2-hour interview during the week of the 2010 Summer Institute.

The facilitator training was conducted early in the project and oriented the coordinators to the Photovoice project, which included instructions on how to approach and educate participants for the project. Each facilitator was issued two to six digital cameras and corresponding memory

chips. They also were provided with instructions, photo logs, and talent releases for distribution to the participants. Participants were asked to consent to participate in the study by members of the research team during meetings as arranged by facilitators. Consent was complicated by the need for a talent release, both for the participant and for any other identifiable individuals in pictures, so explanation of the talent release was an important part of the consenting process. For participants who spoke Spanish, the consent form, talent release, and demographic questionnaire were provided in Spanish. A research team member fluent in Spanish also consented all Spanish speaking individuals into the study.

After the participants attended two training workshops they went out in their communities and took the following photos.

Where they eat their dinner
Where they shop for food
Where they go when they are sick
Where they go to socialize
The street where they live
Their means of transportation
An unhealthy place in their neighborhood
Where they work

After the participants had the opportunity to take photos, a second meeting was held to collect cameras and talent releases, and interview dates were confirmed with each participant and school coordinator.

Process

The faculty, staff and students who participated in the 2010 SI were divided into twenty interview teams of six or seven members with at least one faculty leader. Each of these teams was deployed on one evening to the schools and community sites to interview participants. On the night of the interviews, all 53 participants came to and participated in the interviews. The interview teams received an interview guide and verbal instructions on how to conduct the sessions during the opening sessions of the institute, and they were given the previous photos collected by the participants mounted on 8" x 8" display boards with blank captions.

During the interview, participants were asked to provide a short description of each image and provide a caption underneath the picture. The questions were designed to be open-ended to encourage participants to tell their stories about their lives and their environment from their personal perspectives and experiences.

Figure 4: Example of Nine Participant Photos

Interviewers were instructed to ask questions such as:

> Describe where you live and whom you live with? How long have you and your family lived there? Where did you grow up?
> Tell us about your neighborhood? What is its history? How many neighbors do you know? What goods and services are available?
> Who do you eat with? Where does your food come from? What foods do you commonly eat?
> How do you get around? Where do you go often?
> What do you do for a living? Describe your work?
> What do you do if you get sick? Where do you go for help?
> What are your hopes for the future?

Each interview session lasted up to 90 minutes and was recorded using digital audio recorders. For participants who spoke Spanish, an interpreter was provided. Interviews in Spanish were translated and transcribed into English by a Spanish-speaking member of the research team. The participants were asked to complete a questionnaire about basic demographics of gender, race, age, marriage status, income, education, and health care insurance status. The interview teams also took notes and recorded important quotes to reflect their impressions of the interview. At the conclusion of the interview, the participants were thanked and provided information about the community luncheon and viewing of the completed project. The cameras were returned to the participants to keep as thanks for their contribution to the project.

Summary of Data Collection Efforts

This report summarizes data from a variety of sources. Table 1shows a summary of the data collected, analyzed, and documented in this report. In addition to the photos, interviews, and questionnaires collected from the Photovoice participants during summer of 2010, both student and faculty participants in the Summer Institute were surveyed about their experiences in the SI, including their perceptions of Photovoice interviews. Finally, the research team invited TASCI school coordinators to participate in a focus group. In the group, they were asked to share their experiences during and impressions of the Photovoice research project. They were also asked what impact the Photovoice project had on their school, the participants in general, and themselves in particular.

Table 1: Summary of Data Collection

Instrument	Description	Source	Collection Period
Photos	477 pictures captured by 53 participants	Photovoice participants	Summer 2010
Photovoice Interviews	53 interviews transcribed & coded	PV participants & SI interview groups	Summer Institute 2010
Demographic Questionnaire	53 surveys in SPSS, linked to qualitative data file	PV Participants	Summer 2010
Post SI Focus Groups	Focus groups centered on perceptions and impact of PV research project	TASCI school coordinators	Fall 2010
Perceptions of Photovoice as Part of SI	Observations, learning, and other impressions	Student/faculty SI participants	Summer 2010

Data Analysis

Data analysis included multiple methods: qualitative analysis using NVIVO software, quantitative analysis using SPSS, and geographic analysis and mapping.

Qualitative Analysis

Coding Charette. The first step of the qualitative analysis process was a coding charette.[1] At the charette, all members of the research team organized the photos into groups based on observations and themes into groups using Velcro and moveable boards. After the day-long meeting, the team identified themes to be used for the first round of coding.

[1]Often used in community-based health research projects (Sanoff, 1999; McAvoy et al, 2004), a **charette** is a series of collaborative and intensive work sessions that harnesses interests, talents, and ideas of a diverse group of people. The end product of a charette is the development of a plan for action.

Coding Interviews. Each interview was coded by three researchers and checked for reliability and validity. The research team met weekly to verify and validate the coding terms. A systematic process of coding was used that identified patterns and developing themes in the data (Bogan & Biklen, 2003). After the first few weeks, the codes originally identified in the charette were modified and streamlined. If relationships emerged among coded themes and patterns, the researchers established a parent-child hierarchy by moving some codes into child nodes' under a larger theme/pattern. Researchers also used the data from the demographic questionnaire to analyze the codes by attributes (i.e., to examine health literacy by education level).

Quantitative Analysis

Analysis began with an exploration of the data, including univariate and bivariate analysis and descriptive statistics. The demographic characteristics of the sample were examined, and descriptive statistics on the demographic variables were generated. Qualitative comments collected in the survey were organized by theme and are presented in tables within this report.

Geographic Analysis and Mapping

Geographic analysis and mapping was accomplished using the ARCINFO Geographic Information System (GIS), version 9.2 designed and licensed by ESRI, Inc. Base maps where created using vector graphic shape files from the U.S. Census Bureau in TigerLine format, including city boundaries, bodies of water, schools, streets, and street addresses. Participants' addresses were matched with census addresses, using the geocoding algorithm included in the software, a process that compares street numbers, street names, and zip codes in the database tables to the address delimiters and street names in the shape files. A similar process was used to geocode the addresses of grocery stores and health-care providers identified by participants in their photographs and described in their interviews. The StreetMap USA database was used with the software's Network Analyst to calculate routes between participant addresses, grocery stores, and health-care providers.

Structure of the Results Report

As previously described in this report, data was collected from multiple sources, in multiple formats at multiple times. The results section is organized into three main components: results from the demographic questionnaire, analysis of themes from photographs and narratives, and conclusions and recommendations.

The first section highlights findings from the demographic questionnaire and provides an overview of the Photovoice participants.

The following section of the report highlights from selected themes and analysis of photographs and interview data. Several subthemes are explored within this section including: health, food security, unhealthy place, social relationships, transportation, and neighborhood.

The first theme explored is the broad concept of health and includes analysis of the health status of participants and their household members, source and location of and travel to healthcare access, cost and quality of health care, health insurance status, and health literacy.

The next theme focuses on food security and includes analysis of access and travel to grocery stores and perceptions of food access and healthy food. This segment of the report also explores the dinner photographs and participant reflections of dinner time, eating out, fast food restaurants, and struggles to shop, cook, and maintain a healthy diet.

The unhealthy place theme explores further the photographs taken by participants that represented the unhealthiest place in their neighborhoods.

Following this, the theme of social relationships is explored through both the narratives and photographs that highlighted the theme of socialization. In this section, sub themes related to social relationships such as social exchange, religion, friendships, and pets are discussed.

The transportation theme briefly explores the photographs that participants took when asked, "How do you get around?" This discussion leads to the final highlighted theme of neighborhood, which explores the photographs of street life and participant comments in transcripts about neighborhood life.

The final section of this report focuses on specific feedback to both TACSI and SCM. It explores the learning, perceptions of all Photovoice participants, school coordinators, as well as students and faculty who participated in the Summer Institute and Photovoice project.

In the SCM section, the report focuses on what students learned from the experience, comments and feedback specific to OU Clinics, and the interviewing skills of the SI interview team members.

The TACSI section focuses on what Photovoice participants gained from participating in the project and what TACSI school coordinators learned about their communities and participants.

The report then concludes with a discussion of the strengths and limitations of this study as well as a summary of the main conclusions that emerged in this report.

Demographic Questionnaire: Summary of Results

The first section of the report presents an overview of the Photovoice participants, including basic demographics. Appendix A provides an overview of all participants and is organized by community school affiliation.

A Description of the Photovoice Participants

As noted previously, 53 individuals agreed to become a part of the Photovoice research project, which involved taking photos, participating in a 2-hour interview and completing a short demographic questionnaire. Participants were recruited by TACSI school coordinators.

The 53 respondents were from 14 different community schools and two school districts: Union Public Schools and Tulsa Public Schools. These schools are listed in Table 2.

Table 2: Schools and Participant Numbers

School	District	Participants	Location in City
Briar Glen	Union	4	East
Bryant	Tulsa	4	Northeast
Cooper	Tulsa	6	East
Eugene Field	Tulsa	5	West
Hawthorne	Tulsa	3	North

Kendall Whittier	Tulsa	2	Central
Mark Twain	Tulsa	5	Northwest
Marshall	Tulsa	4	South
McClure	Tulsa	4	South
McKinley	Tulsa	4	Northeast
Remington	Tulsa	2	Southwest
Robertson	Tulsa	2	Southwest
Rosa Parks	Union	4	East
Roy Clark	Union	4	East
	TOTAL	53	

The mix of the Photovoice participants group was 74% female with an average age of 41. Just under one-half of the participants were unemployed. Almost all participants owned a car, and those who were employed outside the home traveled approximately 7 miles to work. A little under a half of the participants owned homes, and the rest either rented or were in a transitional living situation. Over half of the participants indicated that they were white, a little under one-third of the participants self-identified as African American, and fewer than 10% self-identified as Hispanic, Asian, or Native American. Sixty percent of those who participated indicated they were married, 20% were single, and 15% indicated they were divorced. Average household income among participants was $28,084, reflecting overall that most of the households had relatively low incomes. Education levels were more variable, with about 16% of the participants reporting some high school education or less, about 20% graduated from high school or earned a general education diploma (GED), a little under 40% reported finishing some college, slightly more than 10% reporting a college degree, and about 12% reporting some post graduate education.

One of the objectives of this project was to explore health and health access issues. Thus, participants were asked some questions about their health, the health of family members, and insurance status. A little over a third of the participants reported that they did not have health insurance coverage. On average, participants reported that about 80% of their household members were covered by medical insurance.

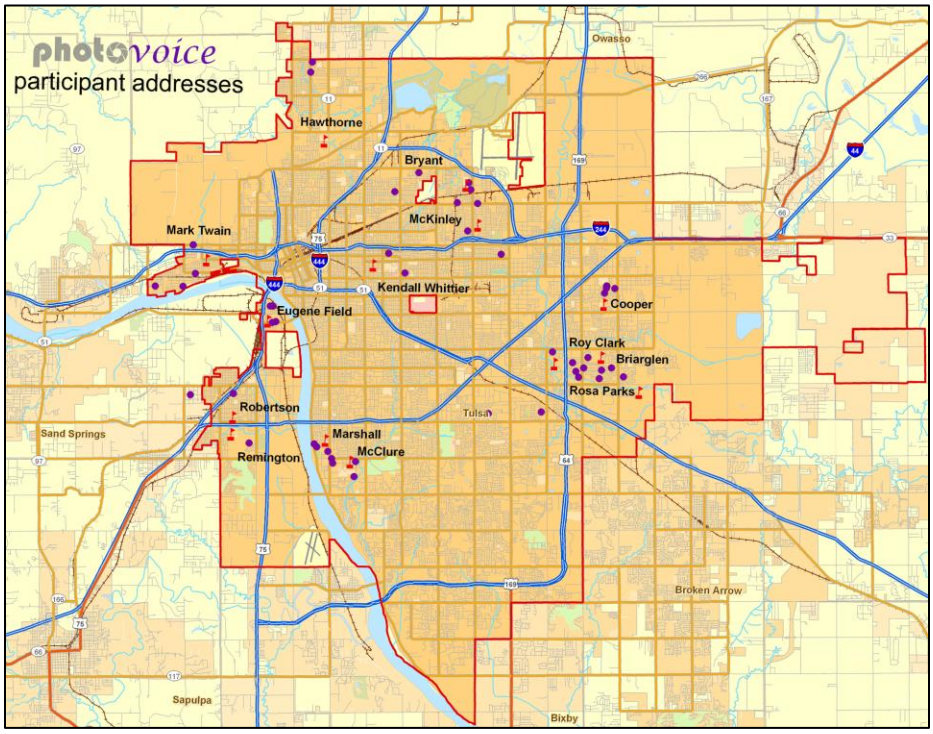
Table 3: Demographic Characteristics of Photovoice Participants (n=53)

Gender	N	%	Marriage Status	N	%
Female	39	73.6	Married	32	60.4
Male	14	26.4	Single	11	20.8
			Divorce	8	15.1

As previously noted, because TASC school coordinators chose participants, the participants resided in areas located near the community schools. The one exception to this was the

participants from Hawthorne who lived a bit farther away from the Hawthorne than other participants who lived closer to their community school. Figure 5 shows the locations of participant residences and community schools. There is a concentration of participants in east Tulsa (the location of three Union schools and one Tulsa community school). Although south and central Tulsa are generally considered to be areas of the city with strong economic development, the two south Tulsa schools and the one central Tulsa school that participated are located in contexts that vary from this general assumption. The two south Tulsa schools, McClure and Marshall, are located in areas that contain clusters of apartments that are used for low-income and subsidized housing. Kendall-Whittier is located in an area of the city that is experiencing rapid demographic and social change.

Figure 5: Map of Participant Addresses and Community Schools Locations



Analysis of Themes

The following section highlights the qualitative analysis of the photographs and narratives of the Photovoice participants.

Health Status

About 80% of the respondents rated their personal health as above average or excellent on the brief demographic questionnaire, while the remaining participants rated their health as average or below. When asked open-ended questions about health conditions, 13 respondents (roughly a quarter of the participants) listed specific health issues such as diabetes, congestive heart failure, accidents, dental problems, and high cholesterol. Diabetes was the most frequently cited problem, followed by high blood pressure and hypertension. A handful mentioned more chronic health problems such as amputation due to a health condition, multiple sclerosis, fibromyalgia, or multiple health conditions. One person's response about his condition listed all of the following conditions: amputee, pulmonary hypertension, diabetic, renal failure, congestive heart failure, and bone

problems. Thus, although the majority rated their health as good, about a one-fourth did not; and many of these individuals noted serious or multiple health concerns.

Participants were also asked about the health of members of their households and other important individuals in their lives. The research team created a variable that measured average health of all household members, using a range of 1-5, with 1 being poor health and 5 being excellent health. The average rating of all household members' health listed by participants was 4.42, indicating above average health. Table 4 notes the average self-rated health for household members. Each participant rated the health of each household member, so totals do not equal the number of participants (n=53).

Further, a relationship between health and age can be observed in this table, with younger household members' health rated on the high end of the rating scale. Only a handful of household members were rated in poor health. Of those who responded to the open-ended questions about the health of their household members, responses indicated similar problems as those mentioned in the self-health rating, including arthritis, cancer, high blood pressure, diabetes, accidents. The most commonly mentioned problem of household members was heart problems followed by diabetes.

Table 4: Health Rating of Self and Household Members

	Household Members					
	HH 1	HH 2	HH 3	HH 4	HH 5	HH 6
Average Age of HH Member	**13**	**7**	**8**	**4**	**16**	**26**
Poor						
Somewhat poor						
Below Average						
Average	2	1				
Above Average	3	1				1
Excellent	29	22	12	4	2	
TOTAL	**34**	**24**	**12**	**4**	**2**	**1**

(range 1-5, with 1 poor and 5 excellent)

Source of Health Care

When participants were asked, "Where do you go when you are sick," their responses were divided into four groups based on the primary place identified as the source of their health care:

- self-care
- personal physician or private clinic (MD Clinic)
- hospital, urgent care (UC), or emergency room
- community health clinic

Among the participants, 30% indicated they would seek care at a community health clinic, which included university community, medical, health-care clinics and hospitals, community health-care clinics, Indian Health Services, and a Veterans Administration out-patient clinic. Just less than 30% indicated that they receive care from a private physician or clinic, and 15% indicated they have

received their care at an urgent medical center or hospital. Upon further examination, almost 25% of the participants indicated they rely on self-care for preventative alternative, which included responses such as utilize local drug stores for over-the-counter medications; and many participants simply stated that they would just go to bed when they were sick due to issues with time, money, and lack of health insurance. Table 5 lists these findings.

Table 5: Where PV Participants Seek Healthcare

Source of Health Care	N	%
Self-Care	12	23.1
MD/Clinic	15	28.8
UC/Hospital	8	15.4
Community Health	17	32.7

Table 6 shows the results of where participants seek health care by insurance status. Findings indicated that those who receive health care at community health clinics or engage in self-care are more likely to be uninsured. Of those without health insurance, 50% receive care at community health clinics and 30% engage in self-care. Of those with health insurance, 38% receive care from private doctors or clinics, 26% receive care at community health clinics, and 17% receive care at urgent care facilities or hospitals and engage in self-care.

Table 6: Source of Healthcare by Insurance Status

	Have Insurance?	
Source of Health Care	No	Yes
Self-Care	6 (37.5%)	6 (17.6%)
MD Clinic	1 (6.3%)	13 (38.2%)
UC/Hospital	1 (6.3%)	6 (17.6%)
Community Health	8 (50.0%)	9 (26.5%)

The research team also explored self-rated health status of participants by location of health care. Table 7 and Figure 6 show the participant self-rated health status by source of health care. Results indicated that those who responded that they received health care at community health clinics have the lowest self-rated health status (3.56).

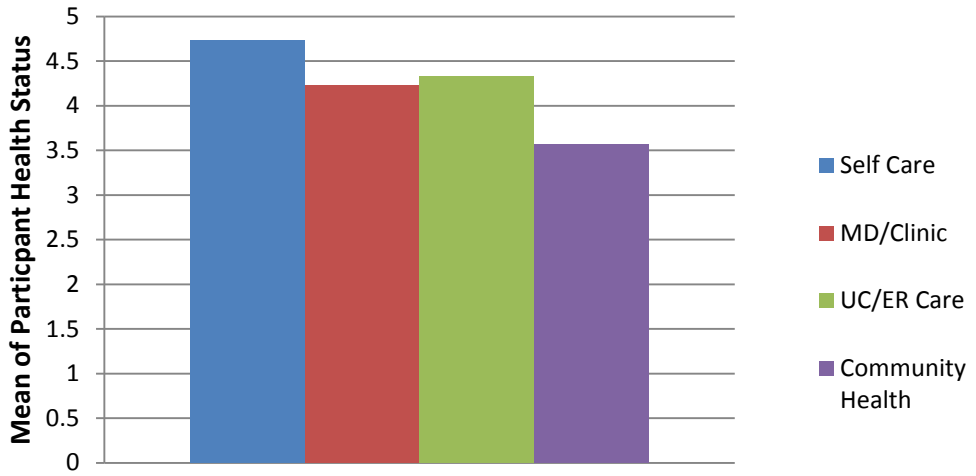
Table 7: Self-Rated Participant Health by Source of Healthcare

Facility	N	Mean	SD	Range
Self-Care	11	4.727	.6467	3-5
UC/Hospital	6	4.333	.8165	1-5
MD/Clinic	13	4.231	1.3009	3-5

Community Health	16	3.563	1.6721	0-5

Note: range is 1–5, with 1 being poor health and 5 being excellent health.

Figure 6: Mean of Health Status by Source of Healthcare



Further analysis was conducted to determine relationships between income, education, age, and location of health care facility. The results indicate that those who receive health care at community health clinics have the lowest income levels and education levels of all participants who receive health care from other sources. Notably, the income differential between those who receive care at community health clinics versus from private physicians or private clinics is $24,481.80. Further, the income of those who noted that they engage in self-care as opposed to from formal sources of health care have the highest incomes of all participants. This finding may reflect that although those who engage in self-care have higher household incomes, this income level places them on "dangerous middle ground"—too high to qualify for assistance, but too low to adequately cover health care, particularly in the absence of health insurance.

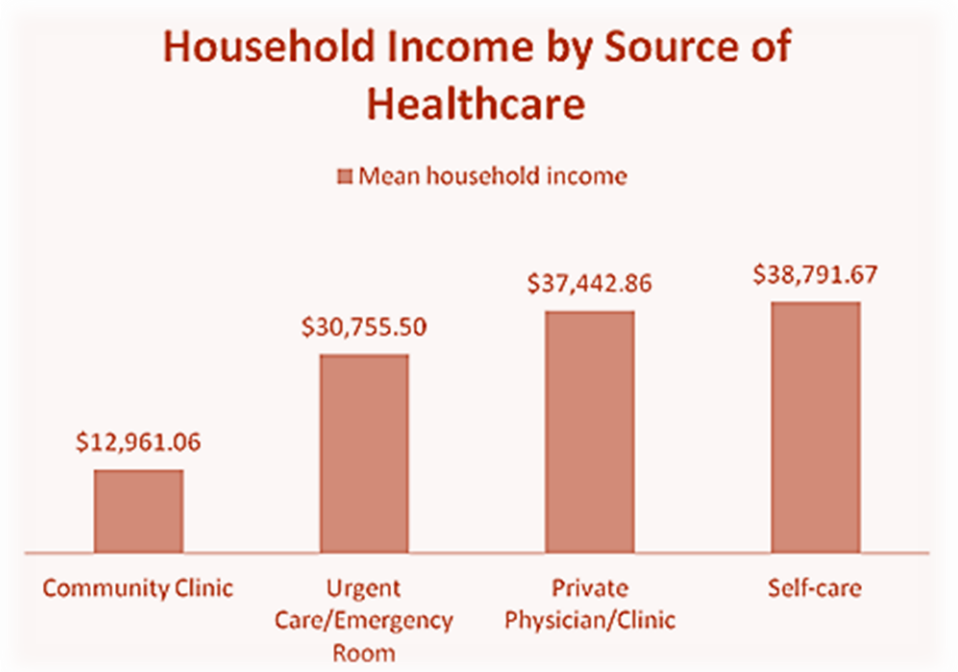


Figure 7: Household Income Differentials by Source of Healthcare

While these differences were not large, the source of health care also varied by age of participant. As noted in Figure 8, the participants who indicated that their source of health care was self-care, were the youngest group, followed by those who use emergency rooms, or urgent care facilities. This group was followed by those who received care from community health clinics while those who indicated their source of health care as private physician or clinics were the oldest group.

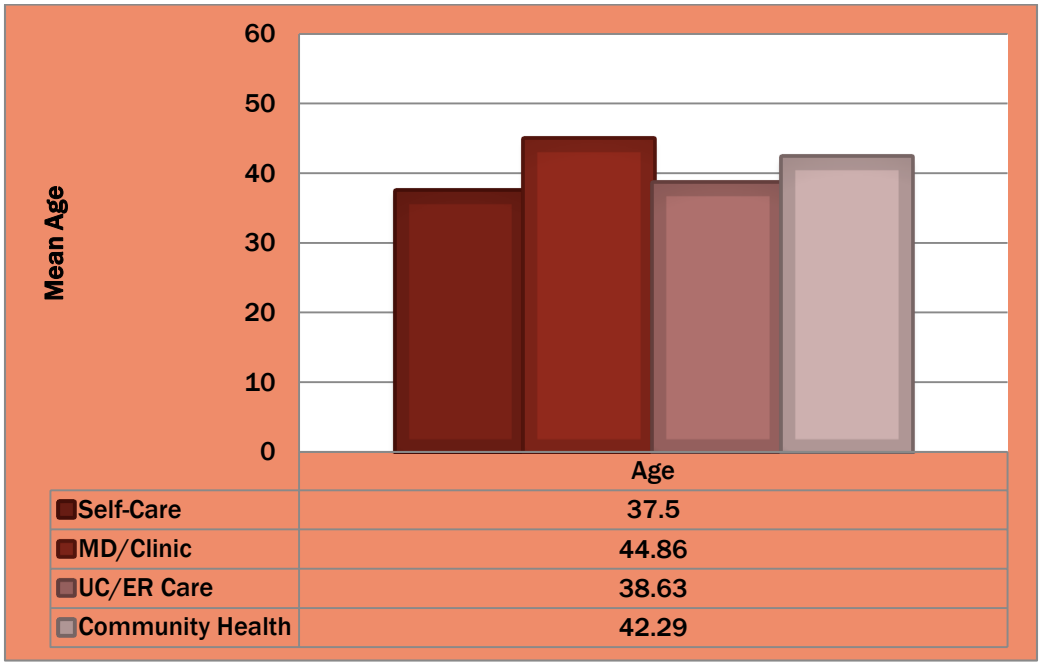


Figure 8: Mean Participant Age by Source of Healthcare

Source of health care was also examined by participant ethnicity, and results are listed in Table 8. Twenty-eight percent of Caucasian participants, 38% of African American participants, 50% of Native American participants, and 40% of Hispanic participants received health care at community health clinics. Approximately 30% of both African American and White particpants received care from a private physican or clinic. Caucasian participants made up three-fourths of those who indicated that their source of health care was self-care.

Table 8: Source of Healthcare by Participant Ethnicity

Source of Healthcare	White N (%)	Non-White N (%)	Total
Self-Care	9 (75)	3 (25)	12
MD/Clinic	9 (64)	5 (36)	14
UC/ER	2 (25)	6 (75)	8
Community Health	8 (47)	9 (53)	17
Total	28	13	51

Finally, each transcript was coded each time a particular health condition was mentioned by a participant. Note that all of those mentioned do not all reflect a personal health concern of the participant, but could also reflect their concern for a friend, family member, or neighbor. Interestingly, when these health conditions were organized by source of health care, results reveal that almost 50% of all health problems mentioned in interviews was from participants who stated that they received care at a community health clinic. Again, while these health problems were not specific to the participant directly, they do point to a broader issue of health-care problems that surround these participants, perhaps to the health status of the larger community. As noted

previously, those who received care at community health clinics have lower self-rated health status, lower household incomes, and lower levels of education than those who seek their care at other health facilities. Not surprisingly, those who receive their care at private physician offices reported the fewest health problems.

There were three possible (or a combination of the three) explanations for the increased number of health problems reported by the participants who receive care at community health clinics: Participants who are utilizing community health clinics are reporting lower incomes which correlate with multiple social determinants of health care such as, access to quality foods, increased physical and psychological stress, and increases in environmental hazards.

Community health care clinics often utilize interdisciplinary resident treatment teams which may be taking additional time in assessing patients' medical conditions, and therefore increasing the number of diagnoses per patient.

The challenges associated with many of the patients who indicate using community health clinics (complex health problems, low income and education levels) may also make it more challenging to deliver high quality health care in the community health settings.

Table 9: Health Problems Mentioned by Participants by Source of Healthcare

Source of Health Care	ADHD	Allergies	Dementia	Asthma	Brain	Cancer	Dental	Diabetes	Heart/Blood Pressure	Mental illness	Substance abuse	Tobacco Use	Weight Issues	TOTAL
Self-Care	0	0	0	1	1	2	0	1	1	0	2	1	2	11
MD or Clinic	1	0	0	0	0	1	0	0	0	1	0	2	0	5
UC/ER	0	0	1	1	1	1	1	1	1	0	1	0	0	8
Community Health	1	2	0	2	0	2	1	4	3	4	0	1	2	22
TOTAL	2	2	1	4	2	6	2	6	5	5	3	4	4	46

Self-Care – Further Examination

Because many of the participants noted that they engaged in self-care as opposed to seeking the care from formal health care services such as a clinic or private medical provider, the narratives of these participants were explored further.

Of the participants who fell into the category of *self-care*, most indicated their bed, home, or shower as the place they went to feel better. Several participants noted that they would just try to "tough it out" by simply going to bed to try to keep the illness at bay. Other participants noted that affordability and lack of insurance coverage kept them from going to the doctor when needed. Finally, some participants noted that they did not trust the health system or "big brother" to take care of their needs. Others noted that they did not follow or chose to go against medical advice for care of their conditions.

One of the consequences of ignoring injuries or illness is the potential for the development of more serious illnesses or problems. Although a majority of the participants rated their health as good, a quarter of participants may be at risk due to lack of care because they have no insurance coverage. Overall, those whose source of healthcare was self-care rated their health as good (see table 6) and they took care of themselves at home because they don't usually get sick. This may be risky – both in terms of prevention and the exacerbation of symptoms or illness due to avoiding care.

Participants' Quotes about Being Sick

"Mainly when I'm sick I would go to Walgreens."

"I have learned to kind of cope with it [condition]."

"I've been very good on managing [my condition]. There's been several times when I've just had to crawl up in bed and just stay there."

"So I pretty much stuck to Ibuprofen and toughed it out."

"I usually just [lay] down and take some Nyquil to try "and sleep it away.

"When I'm sick I go and take a shower and turn the heat up real high and just get kind of steamed and it gets the stuff out of my nose."

"Basically whenever I get sick, I go to bed."

"I'm sick it's because I need rest. I will take Nyquil all day, sleep all day."

Other participants noted they distrusted medical professionals and described situations in which they or someone else ignored medical advice. For example, one response was that an acquaintance "just decided to quit taking his medicine and quit going to the doctor and it kind of worked out for him." Some of the participants noted a fine line between paying for health insurance coverage that they might not need versus paying for health care when you need it.

One participant shared this viewpoint:

"It just seems like it's [insurance] so niche-oriented that there are too many cracks to fall through. Like what happened to me. I know people now understand that that happens, you know, 'cause it happened to a bunch of us. But no one set out to make that happen. They just did what they did and, oops, that's what happened. So there are just so many cracks. And there's, I guess, it's [insurance companies] just too big to really be monitored. And I don't think the federal government would do a good job of monitoring it. But I wish it were possible. I'm really at square one."

Finally, some of the participants noted that cost of health care or lack of health insurance kept them from accessing the care they need. Figure 9 shows three photos of places participants go for self-care when they are ill. The following pictures with captions tell the participants' stories.

Figure 9: Selected Photos and Quotes from Self-care Participants

"This is where I go when I'm sick. Can't afford the doctor. So I usually just, after my husband gets home I usually just lay down on the couch and hope it passes with some Nyquil. We usually, I mean we've got insurance but with his co-pays and stuff, we more or less use it for the kids, and I mean he took me off of it for a while and then I got sick and he was like "Alright, I'm putting you back on." I never use it. And he really don't either. You have to draw him in. I usually just lay down and take some Nyquil and try to sleep it away."

"When I get sick, I just have to go to bed because I don't have health insurance. I only go to the doctor when I am pregnant."

"I do not have any health insurance at all, no whatsoever, so umm, neither does my husband so if we get sick, that's where we get to go. We can't afford to go, there's no way."

Travel to Health Care

Examination of the photographs and interview transcripts associated with the questions asked about where participants go when they are sick enabled the mapping of 36 routes from participants' residences to their health-care providers. Figure 10 shows the routes. Thirty-four of the health-care providers are located in Tulsa, and two are located in the suburban communities of Broken Arrow and Owasso. Nineteen participants go to doctors' offices, clinics, and hospitals; 14 go to safety net public or university clinics, the remaining three participants opt for self-care at home.

Figure 11 shows all of the routes disaggregated from the geography and classified by distance and provider destination. The minimum route distance is .1 mile and the maximum is 22.1 miles with a mean distance of 7.2 miles . These distances and the explanations provided by participants indicate that most participants travel by automobile to their health providers and that health care is delivered on a regional basis. Based on driving times, the minimum route duration is 12 seconds, and the maximum is 23 minutes 36 seconds with a mean of 8 minutes 34 seconds. Routes arranged by length and type show that routes to healthcare providers are generally longer than routes to food stores (food travel is discussed later in this report.)

Figure 10: Maps of Healthcare Travel in Geographical Context

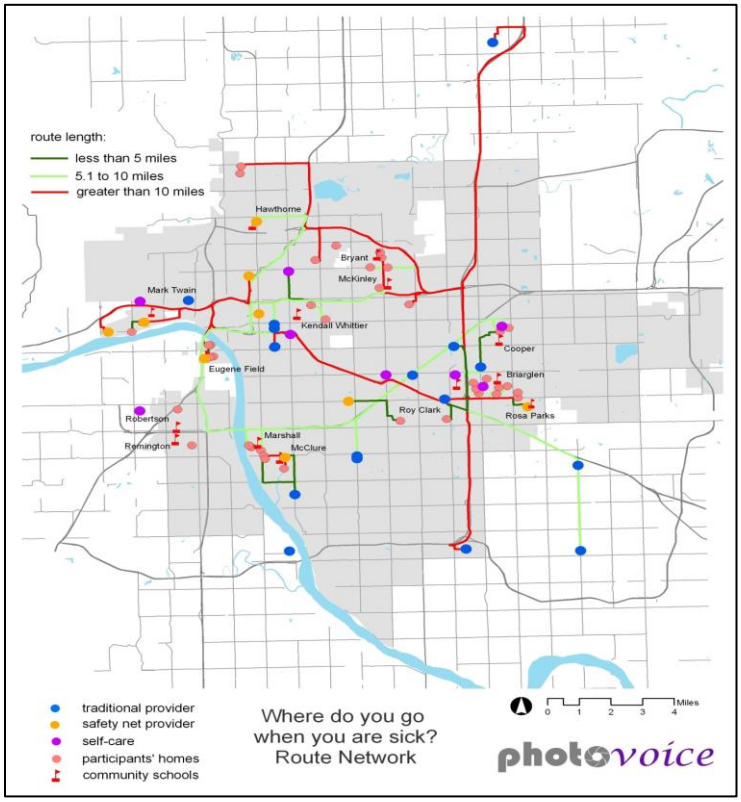
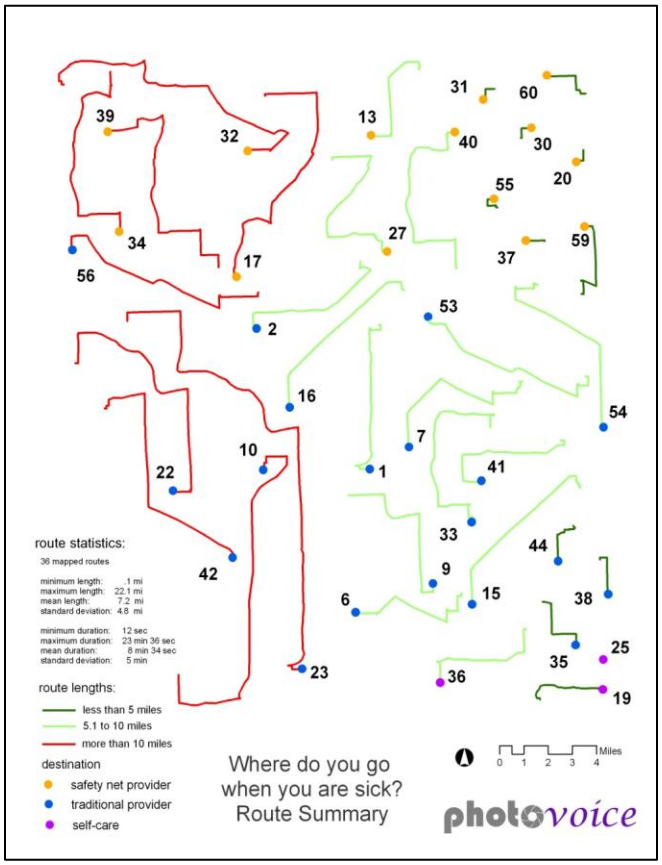


Figure 11: Maps of Healthcare Disaggregated



In summary, participants travel far to access healthcare. Healthcare is not a localized phenomenon, and people are acclimated to traveling relatively far to receive it. Not surprisingly, participants who go to traditional healthcare providers are more likely to have access to transportation because, for the most part, people need a car to access healthcare in the city of Tulsa.

Healthcare Access

Prominent throughout the narratives of the participants was the theme of access to healthcare. Previously this report explored the narratives of those who indicated they chose self-care. In those narratives, many participants reflected on the difficulty and quality of healthcare. Interviews were coded for themes related to healthcare access. Sub-themes that emerged from this analysis include problems and barriers to health care including red tape, cost, long waiting times, language barriers, and lack of health insurance. Participants also describe problems related to the quality of care they received or experienced.

Barriers to Care

Red Tape. Many narratives indicated significant barriers to receiving healthcare, and the most frequent barrier noted was the problem of red tape, i.e., barriers of bureaucracy such as guidelines, qualification requirements, and other rules or regulations that delay access or hinder access to healthcare. Problems with approval processes and exclusions (whether these perceptions were accurate or not) prevented many of the participants from accessing necessary care.

Some participants discussed the struggles associated with their circumstances being very close, but not within, the eligibility range for health insurance or other social services.

> *"They said that we don't qualify for any sort of assistance."*
>
> *"Medicaid will not help me unless I'm pregnant."*
>
> *"I applied for Oklahoma Medicaid and all that, but they said between my job and the child support that I get, I am wealthy."*
>
> *"They say we make $200 too much for any sort of assistance so because of that we can't get any help whatsoever."*

Others discussed difficulties with specific guidelines or "hoops to jump through" in order to establish healthcare services for themselves. Participants noted specific policy guidelines, some of which might be inaccurate or partially inaccurate, as a barrier to accessing care. Nevertheless, even if the perceived barrier was not accurate, the participants' lack of understanding served as a barrier to care.

More specifically, some participants noted strict guidelines for making and keeping appointments, noting little wiggle room if the appointment time could not be met. Sometimes this meant another long wait for a much needed appointment or even braving challenging weather to keep medical appointments. One participant stated, "If you make your appointment, you gotta keep it. . . . So the weather would have been the most challenging, but it's got to be a very good excuse to why you can't be there."

Additionally, access to coverage for certain medications was a problem noted by several participants. One participant who works in the healthcare field stated, "I deal a lot with their medicines. Getting them approved is like pulling teeth. I know of times that I have spent two and three hours on just one patient trying to get their medicines approved."

Cost. Another common barrier to receiving care was cost. Many participants simply did not have the income to afford health care. One interviewer reported that a participant told her that she was unable to receive care because the care provider required $200 in order to see her because the participant had no insurance. Another interviewer reported that a participant shared that "literally all of her [the participant's] money goes to medicine. There's no insurance, and there's no way that I can even have the extra money to go to the doctor. . . . They won't wait for you to get the check. They want their money then. . . . So that's the biggest thing right there is cost. Where am I gonna get this money from?"

> *"There's no insurance, and there's no way that I can even have the extra money to go to the doctor. . . . They won't wait for you to get the check. They want their money then. . . . So that's the biggest thing right there is cost. Where am I gonna get this money from?"*
>
> *"My children don't have insurance…I would probably drive all the way to Claremore to get free medical."*
>
> *"Trying to find a rheumatologist in Tulsa that will take SoonerCare [is a problem]."*
>
> *"I do not have any health insurance. . . .We can't afford to go [to the doctor]. There's no way."*
>
> *"This is where I go, this is the emergency room. I can't afford insurance."*

Insurance. Lack of health insurance was another significant barrier to accessing health care and was the most frequently cited barrier.

Quality. Many of the participants commented on particular healthcare locations, the quality of care at those locations, and a distaste for how they were treated or the care they received at the location. Comments participants gave during their interviews about the quality of care they received included, "I wouldn't give you two cents to put my dog in there." Regarding emergency room care, one participant reported, "I took him to the emergency room, and they were like 'Oh no it's normal.' They said, 'nope nothing.'" Echoing that same sentiment, another participant said, "So I went to the emergency room, and it [blood sugar level] was 696, and the emergency room just sent me home. They sent me home and didn't give me nothing."

Waiting. Several participants noted the problem of long waits for care, particularly in the emergency room. Some also commented about being treated with disrespect or differently from other patients because of their lack of health care in health care settings. Speaking about her relative, a participant stated, "He was in the emergency room for 4 ½ hours before he was seen." Another participant recounted an incident regarding what she interpreted as being ignored by an attendant in the emergency room. "He's the ER attendant. Why doesn't he treat her? He don't. He has to call Community Care's doctor to come in and treat a patient." Another participant decried the 4-month wait it took before her loved one was able to see a doctor who diagnosed the problem as a hernia.

Language. Finally, for a few participants, language barriers got in the way of accessing health care. "When I go [to the health-care place], there is no one who speaks Spanish.

An examination of healthcare access coding by source of healthcare revealed that many of the references coded in the transcripts relating to access of health care were from participants who received care from community health clinics. Of the interviews coded for problems related to healthcare access, 70% of those were participants who received care at community health facilities. Interestingly, the barrier of cost was noted in 62% of those participants whose source of health care was a private physician or clinic.

Table 10: Select Barriers to Care Coding Frequency by Source of Healthcare

Source of Health Care	Cost N(%)	Long Wait N(%)	Low Quality Treatment N(%)	No Insurance N(%)
Self-Care	0 (0)	1 (12.5)	0 (0)	2 (20)
MD/Clinic	5 (62.5)	1 (12.5)	0 (0)	1 (10)
UC/Hospital	0 (0)	1 (12.5)	4 (28.5)	1 (10)
Community Health	3 (37.5)	5 (62.5)	10 (71.5)	6 (60)
TOTAL	8	8	14	10

Health Literacy

Increasingly, national attention has focused on the importance of health literacy in all aspects of healthcare and is defined as "the degree to which individuals have the capacity to obtain, process and understand basic health information needed to make appropriate health decisions

and services needed to prevent or treat illness" (Health Resources and Services Administration, n.d.) Individuals with lower levels of health literacy often struggle with understanding how to use benefits, communicate health concerns or medical history, and have difficulty filling out medical forms, finding providers or services, managing health conditions or medications (HRSA, n.d.).

Researchers coded interviews for health literacy when a participant discussed healthy habits of themselves or others. These comments included beliefs that were either medically-accurate or medically-inaccurate. For example, "I quit smoking because it is bad for me" or "I eat a lot of fried chicken because chicken is good for me."

There were three categories within the health literacy theme that were identified: inaccurate information and knowledge (confusion about medical terms or health behavior/disease); health system interactions (communication breakdown, medical system dis-/mistrust); and inability to follow pro-health behaviors (knowledge without action).

The category of inaccurate information and knowledge includes statements in which participants indicated that they did not fully understand the health condition or disease with which they had been diagnosed by their medical provider. Sometimes the participants' statements involved their own health concern, and other times the condition was impacting a family member or acquaintance/friend.

The health system interactions category includes participants who revealed situations in which there was a communication problem between participants (or people participants knew) and health-care providers. In these narratives, participants described instances of confusion about a health problem they have or about the behavior they should perform or medicine they should take in order to improve health outcomes.

In the final category, inability to follow through with health behaviors, participants noted that they could identify actions they needed to take to improve their health. However, they chose not to engage in those behaviors.

Many respondents noted problems with medical terminology, for example, "*scoliosis of the liver*" or "*rudimentary arthritis*." Others noted incorrect information about their health condition or treatment. Two notable examples of the latter follow:

"That's no worse than a friend of mine who's got a pigs eye….He's got a pigs eye and you look at it and it looks weird but he can see."

"I have another friend that's got a glass bone. One of the bones in his arm is made out of ceramic (hm). And he was a baseball player and he can't play baseball no more."

Table 11: Health Literacy Codes and Selected Examples

Health Literacy Category	Selected Quotes
Inability to Follow Pro-Health Behaviors	
Knowledge Without Action	"I'm very poor at getting like follow ups and check-ups for myself. And I just got into the habit of telling myself, you go to the doctor more." "Well my husband's father died from emphysema from smoking. I thought that would teach him right there, but he hasn't done a thing. So, I don't know."

Inaccurate Information & Knowledge	
Medical Term Confusion	"Last year, one of the kids got sick and passed away from swing flu."
	"My nephew has, uh, it's called shark syndrome."
	"I have an uncle that died from what they call scoliosis to the liver."
	"I don't really know, I actually only learned about that after he had atherosclerosis, so it's kind of similar to Alzheimer's…"
	"No I think she has rudimentary arthritis or something. It's the one that eats out your bone marrow."
	"Actually, it's a new pill. Kipper, Kippa, something like that. I take 6 of those and then four of the generic tegratol."
Health Behavior/Disease State Confusion	"The cancer was making my sugar go up."
	"But when you bake it is still greasy even though fried is greasy is too. I think flour soaks up most of the grease."
	"I had cancer, and they didn't catch it because I have an Asian gene that doesn't detect cancer, throws it off."
	"Well, they told me that the whole thing [autism] maybe he can grow out of it."
	"He's got a lot of problems. The front part of his heart doesn't beat. No, it's the back part, the back part doesn't beat like the front part. They told me at any time he could just go to sleep and not wake up."
Health System Interactions	
Communication Breakdown	"I kept telling them I wasn't diabetic. Instead of them finding out what was causing it, they just kept giving me medicine . . . and my sugar would drop to 40 . . . . And I was having to eat a bowl of sugar just to get it brought back up and that would go on three or four times a month"
	"And they gave me, I don't know some kind of medicine they shot me with. Like to increase, I guess, my sugar because I had a low blood pressure?"
	"He said something, but he said that they way, that the rating I was having with my sugar being so low and my blood pressure. He told me I really need to lay off for a while. Until I get back on track. And I was like, whatever that means, but I don't know what he meant by that. But I was like, whatever that means."

Medical Dis/Mistrust	"Because we people, I think, are bad at that. Like, as far as when it comes to the hospital, we think about oh my god they're going to poke me…I don't want nothing going in my mouth." "I don't like all these doctors because every time I go to a new one, he adds another medication. And then another test and more tests, and you know it just gets expensive." "I don't trust a flu shot". "This right here I have like a very personal vendetta against any kind of what you call it, pharmaceuticals and stuff."

Food and Health

Oklahoma's high rates of obesity and diabetes often indicate unhealthy lifestyle choices, especially an unhealthy diet. The participants self-reported diabetes as their most common health problem. Recently there has been discussion in the popular media regarding "food deserts" in the Tulsa area, especially in north Tulsa. As unhealthy food intake is a factor in diabetes, the lack of access to healthy food in the community should be examined.

Food Pictures

With these two issues in mind—unhealthy diet and lack of access to healthy food, the participants were asked to take two pictures related to food.

The first was a picture of where they get their food, and the second was a picture of where they usually ate.

Overwhelmingly, the majority of the participants, 90% of the 53 participants, reported shopping at national or regional supermarket chains for groceries. Of the participants who shopped at chains, over half shopped at Warehouse Market (34%) or Wal-Mart (28%).

Table 12: Where Participants Grocery Shop

Grocery Store	Chain	N
Warehouse Market	Yes	19
Wal-Mart	Yes	15
Reasor's	Yes	6
Supermercados	No	3
Whole Foods	Yes	2
Kwick Stop	Yes	1
The Harvest	No	1
Perry's	No	1

Farmer's Market	No	1
Harps	No	1
Homeland	Yes	1
Braum's	Yes	1
Food Pyramid	Yes	1
Total		53

Reasons for choosing grocery stores. Participants noted several reasons for choosing specific grocery stores. Most often, they reported a grocery store preference based on location or convenience, price, and meat and produce quality and availability. As one participant stated, "That's where I buy all of my food mainly because it's close to my house." Several other participants made similar statements.

Preference for a particular store might also include avoiding crowds, familiarity with the store layout, and store cleanliness. One participant stated, "You know the layout of the store. You get in, you get out."

The participants who reported shopping at locally owned stores and at Whole Foods all rated their health as above average with six rating their health as excellent (Health rating values were calculated with a range of 1 (poor health) – 5 (excellent health.) The actual health of those who did NOT shop at a grocery chain was slightly higher than those who shopped at chain (4.667 versus 4.085) but not statistically significant.

Although all respondents noted that they have choice as to where they shop, there were differences about on what they based their decisions. Among those who shop at chain grocery stores, they based their choice on the availability of fresh meat, convenience, and price. Responses showed that those who shop at locally owned stores were more likely to base their store choice on the availability of healthy food choices OR their own ethnic preferences. One participant who shopped at an ethnic grocery store said, "This is a Hispanic store. I make my el Mercado. [This is] my market because I like the meat, I like the beef, and I like the cheese from this store. So usually every weekend, I will go there."

Table 13: Grocery Store by Household Income

Grocery Store (n)	Household Income
Whole Foods (2)	$56,500.00
Farmer's Market (1)	$54,000.00
Perry's (1)	$42,000.00
Wal-Mart (14)	$34,321.43
Braum's (1)	$32,500.00
Warehouse Market (18)	$28,447.78
Harps (1)	$20,000.00

Supermercados (3)	$16,333.33
Kwick Stop (1)	$10,000.00
Reasor's (6)	$8,750.00
The Harvest (1)	$.00

Bargain hunting and coupons. Several participants noted that they often traveled to more than one store, particularly in search of a bargain. Many used coupons or compared newspaper advertisements. One individual reported, "Yeah, we do that on Wednesdays when I get sales ads. I'll look and circle who has the best and change it over to a piece of paper and cross off the duplicates from whatever store has the longest and I'll go to that one instead of all three." Another said, "I try to go with my budget. I think about that and that's why I shop at Warehouse Market. It's more my style for a bargain."

Transportation to grocery store. For participants with ongoing medical issues or lack of transportation, the barriers to grocery shopping were difficult to overcome. A few spoke of the challenges of riding the bus with groceries or traversing streets with construction while pushing a grocery cart. One participant summed up his inability to go grocery shopping because of having to rely on others to take him to the store. He hated to inconvenience others. "I don't do any shopping now. I don't have any money to shop and then with the car down and my health, I wait 'til the sun go down and then if I'm going to walk anywhere, it will be to 71st and back. I don't want to make that walk. I'll usually get maybe whoever took me to dialysis to swing me down there right quick and let me grab an item or two. There really hasn't been any real comfortable shopping for a while, but I don't want to inconvenience anybody like that." It was a common sentiment for those who individuals without transportation.

Anti-Wal-Mart sentiment. Although a majority of the participants shopped at chain grocery stores, there were several participants who refused to shop at Wal-Mart. The reasons were varied, from simply not liking Wal-Mart to reports that the meat is unclean. One participant stated, "Yes, their prices are good. Some stuff is more expensive, but I will pay more just so I don't have to go to Wal-Mart." Another reported, "I don't go to Wal-Mart. I hate Wal-Mart. I think it is from the devil."

Whole foods and local shoppers. The participants with the highest mean household income shopped at Whole Foods, followed by the Farmer's Market and Perry's (a locally owned grocery store.) Additionally, the participants who shopped at Whole Foods have the highest self-reported health ratings, while those shopping locally (at Perry's and the Farmer's Market) ranked just under Whole Foods customers' health rankings. Finally, those who reported they shopped at Whole Foods had the longest travel time for grocery shopping, with a mean distance of 11 ½ miles from home. The only exception was the one person who reported zero income and received food from an emergency pantry.

Table 14: Grocery Store Travel Distance Time

Grocery Store (n)	Travel Time Mean (minutes)	Distance Traveled (miles)
The Harvest (1)	13.7924	11.6361
Whole Foods (2)	12.4977	10.8509
Braum's (1)	10.8210	7.9113
Wal-Mart (14)	9.0413	6.7728
Supermercados (3)	7.6183	6.0759
Farmer's Market (1)	6.1581	5.6194
Reasor's (6)	4.3185	3.2962
Harps (1)	4.8256	2.3948
Warehouse Market (18)	2.7951	1.7442
Perry's (1)	2.2517	1.2621
Kwick Stop (1)	.7164	.2985

Fast Food. McDonalds and Sonic were the two fast food chains mentioned most often by participants in response to questions about fast food restaurants they frequented. In their references to these establishments, participants labeled them as places to eat or the unhealthy places in their neighborhoods.

Researchers noted that participants included QuikTrip (QT) in their responses even though it is neither a grocery store nor a fast food chain, and therefore was not an anticipated response to research questions. Despite that, 23% of participants mentioned QT in their interview with no prompt from researchers.

Many participants used QT as a point of reference, i.e., when giving directions to a location. However, it was mentioned in several different contexts: as a place to gather with friends, as a business that cares, as a place to eat for less. Generally participants' reference to Quick Trip was in the context of having a positive regard for the store.

QT Gets a Thumbs Up

As a Place to Gather

"I wouldn't say that because everywhere you turn there's a QuikTrip. On 129th there's a QuikTrip where you can hang out. It's like fenced in with seats right there with umbrellas over them."

"And on the other side of the street from this one, they are building a second generation QuikTrip that has an outdoor section like a patio. So they'll probably become even more of a congregation area because we drove by some of the other ones that have it and there were people just sitting out there all the time."

As a Business that Cares

"Another thing my dad suggested along with other people suggested that they get outdoor seating and they went and got outdoor seating. It's like they actually listened to the people."

As a Place to Eat for Less

"I can feed my whole family at QuikTrip for $10. Go out and we can have 14 hotdogs you know, a big ol' bag of chips, and 14 cokes you know. I feel like a big spender. I can take all my guys out there, get a drink, and cost me $8. You know, it's just cheaper."

"Oh yeah, shopping. I wanted to take another picture of QuikTrip, but I thought that would be over the top."

Pro QuikTrip Sentiment

"For one thing, QuikTrip is just amazing. It's from Oklahoma, makes it even better. And cheap."

"I love QuikTrip."

The last food-related picture that participants were asked to discuss was the place where they ate dinner. Over half of the participants (55%) indicated that they ate dinner at home. Many took photographs of their dining table or family members eating at the table. About a third of the respondents took a photo of a restaurant or a fast food chain. Just fewer than 20% indicated that they commonly ate dinner at a store such as QT. A small percentage took photos of social gatherings (family reunions, church events, etc.), and one person took a picture of her car as her normal eating place.

Table 15: Dinner Photos by Category

Dinner Photo Category	N (%)
Home	29 (.547)
Restaurant	17 (.321)
Store	4 (.174)
Social gathering	2 (.038)
Car	1 (.019)
TOTAL	53

The transcripts also reflect some knowledge about nutrition and awareness of healthy eating habits. Some comments reflect recognition of how difficult it is to change eating habits, either for

themselves or for family members. Regarding food habits, several transcripts mentioned barbeque as a favorite meal. "But yeah, kids enjoyed ribs. They love ribs. I think everybody loves ribs. They like barbeque sauce on everything, hamburgers and hot dogs. So we smother everything." Mexican food was mentioned as a favorite dining-out option. Some also discussed engaging in careful planning and attempts to focus on eating at home around the dinner table. Some narratives reflected eating out options guided by cost. Time was a concern mentioned by some participants as a barrier to planning meals and getting the family eating together.

Table 16: Difficulty in Changing Eating Habits

Struggling to Eat Right	*"Well, people know Braum's has that fresh fruit. Well, my kids hate Braum's because every time we go in there, I go over here. And they want to go over where the ice cream and all the other stuff is and they go over there. I don't not let them go, but they just hate Braum's. Because everytime we go in there, I go over there. And see, Wendy's has the new apple pecan salad with all this stuff in it for like $6 or something. We're broke. So when we went to Wendy's one day and they had that I said I could do that. I said I'm going to go next door, go back over to Braum's. I said what the heck. I said I want a salad but I'm not going to pay $6 for a salad. I can go to Braum's and buy all that stuff for $3 and so I went in there and showed them. Lettuce, $1.50 for the already mixed lettuce. And I seen the apples over there. And I said what else do they have in there…pecans. I said, blah, I don't need the pecans. You know, but everything that was in that $6 salad I was able to go in this section and come out with...and they hate for me to be right all the time anyway. I first want to challenge their mind. I said I could go in there and get everything that's in that salad from Braum's. They have healthy choices. You can eat healthy at a fast food restaurant. You don't always have to get the crap."*
Careful Planning, Trying to Eat at Home	*"But I cook six days a week and we go out one day a week, so it's kind of my thing. I told my husband when I quit my job, I'm not giving up going out to dinner once a week, so we go out once a week and I cook the other six. You can't see it on the fridge, but I have a menu, it's just up a little bit, but I have a menu that I write out every week."* *"Here is where we eat most. I cook dinner Monday thru Friday, sometimes Saturday, and we just sit and enjoy having dinner at the table than going out to a restaurant. If we do it is on an occasion to celebrate something but mostly at home. The kids like dinner and to help out. Yea, we all like to eat dinner at the table. It's fun and for us."* *"Yeah, it's a habit. And I really concentrated more. We probably eat out a lot less, I try, I've been cooking about three meals at home instead now a week, so there's been some changes."*
Dinner Table Time	*"Yeah. Sometimes we wait. It's because we don't have an exact time…not exact in the house at the same time. So when he's early we eat all together. Is it a time constraint, I know for myself I like to cook but I find myself running out of time to where I'm just so exhausted when I get home I just want to eat whatever is there or you just don't like to do it."*
Bargain Eating	*"And CiCi's Pizza, we love it, the buffet. It's reasonable for a family of five. You know You can't go anywhere anymore for under 25 bucks, especially when you're family is quite large.* *"Well and you know their Kid's Meals, they're only $1.99, so I mean you really can't beat that at all, I mean to feed, I mean I think me and my husband and*

kids, we can go there for about 25 bucks, which to have a really decent dinner, that's really cheap!"

Food Travel

Participants were asked to take a photograph of where they get their food. Examination of these photographs and interview transcripts enabled researchers to map 45 routes from participants' residences to grocery stores and markets that they frequented as shown in Figure 12.

Sixteen participants shopped at Warehouse Market, a discount grocery chain.

Thirteen shopped at Walmart stores or Walmart Neighborhood Markets.

The remaining 16 shopped at a variety of regional or local food stores.

Twenty-nine participants traveled less than five miles to shop for food.

Nine traveled five to 10 miles.

Seven traveled more than 10 miles.

Figure 12: Map of Grocery Store Travel

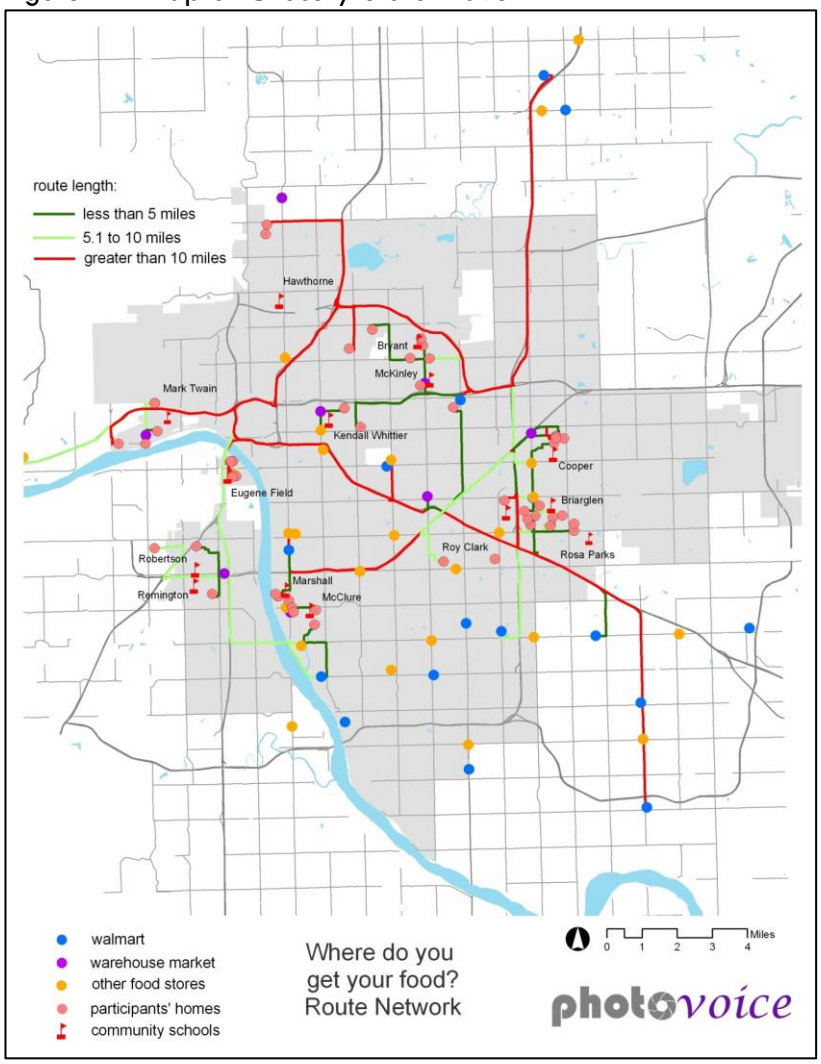
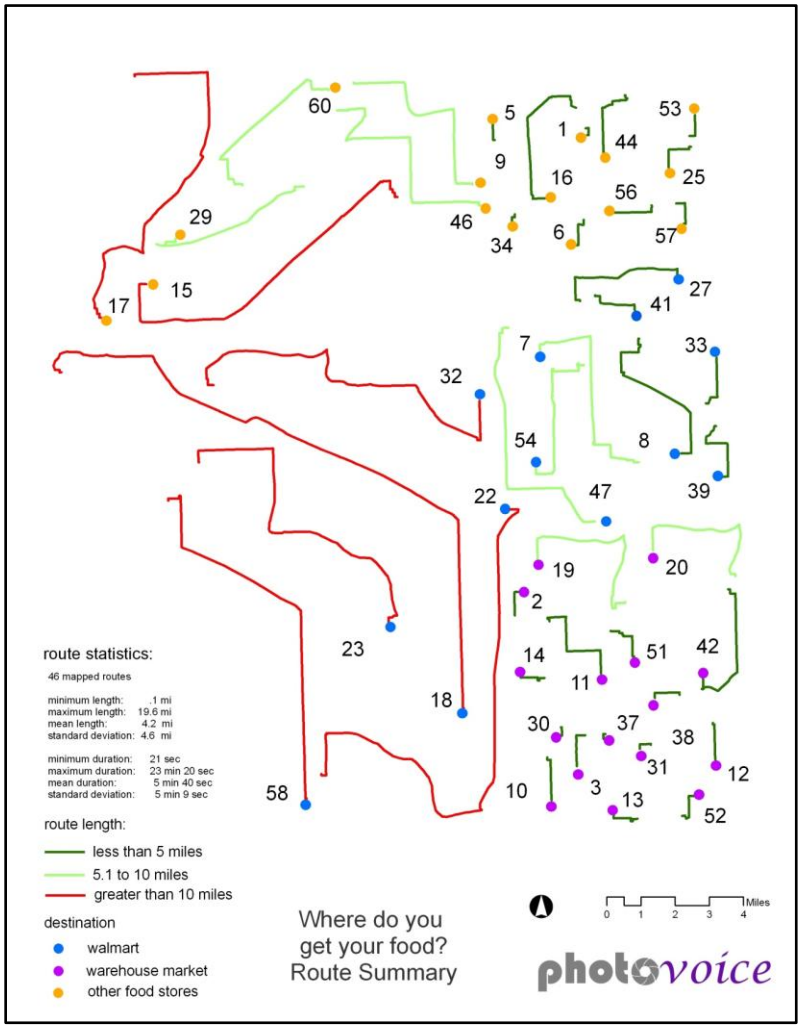


Figure 13 shows all of the routes disaggregated from the geography and classified by distance and destination. The minimum route distance is 0.1 mile and the maximum is 19.6 miles with a mean distance of 4.2 miles. These distances and the explanations provided by participants indicate most participants travel by automobile to shop. Based on driving times, the minimum route duration is 21 seconds and the maximum is 23 minutes and 20 seconds with a mean of 5 minutes and 40 seconds. Arranging routes by length and type shows some interesting patterns. For instance, participants who shop at Warehouse Market do not travel far to get their food, whereas participants shopping at Wal-Mart tended to travel much greater distances. It is possible that Warehouse Market has located its stores in neighborhoods convenient to discount shoppers and shoppers without readily accessible transportation.

Figure 13: Grocery Store Travel Disaggregated by Geography and Provider Location



Unhealthy Place

Participants were asked to take a photograph of an unhealthy place in their neighborhoods. Photographs in this category were coded as "Unhealthy Place" or as one of the themes and/or subthemes identified during the coding process. These same themes were also coded in the transcripts, which may or may not have any relationship with the Unhealthy Place photos.

Interviewers were instructed to ask participants about each photograph. Many of the Unhealthy Place photographs have no related remarks in the transcripts or have only short cursory remarks such as "The unhealthy part of my neighborhood" or "That's one of your unhealthy places," with no further elaboration.

Table 17: Difficulty in Changing Eating Habits

Theme and Subthemes	Total No. of References	No. of Photos Coded with Theme	No. of Interviews Coded with Theme
Unhealthy Place	148	26	25
Abandonment	34	8	2
Drainage – water bodies	19	10	2
Environmental	38	26	6
Refinery	5	3	0
Safety-Crime	26	8	4
Sex-oriented business	3	2	0
Trash	20	8	4
Vices	4	3	1
Alcohol	31	9	4
Cigarettes	12	5	4
Food	22	8	4

The most prevalent theme, the Environmental theme, was identified in 32 of the interviews. The 26 photographs illustrating this theme mostly featured the outdoors, including houses and buildings, trash, waterways, and overgrown yards. In the six transcripts tagged Environmental, comments ranged from complaints about overfilled trash bins to concerns about gunshots at a neighborhood bar.

The second most prevalent theme was "vices," which included photos of drugs, alcohol, bars, or cigarettes, identified in 14 of the interviews. There were nine photos illustrating this theme. All but one picture showed liquor stores and bars. The exception was an interior shot of a liquor store shelf full of bottles.

The "trash" theme was identified in 13 interviews. The Trash photos mainly depicted overfilled trash bins as well as two front yards full of overgrown grass.

The "drainage" theme was identified in 12 of the interviews. The 10 photographs illustrating this theme included photos of sewage leaks, water-filled gullies, and standing water. There were two references in interviews to drainage issues.

"Food" theme photos were also each identified in 12 interviews. They showed photos of fast food menus, fast food and convenience store signs and exteriors. Only one photo showed actual food.

The photos associated with "safety/crime" include a fence defaced with graffiti, bars and convenience stores, an unsafe swimming pool, and a trash-filled alley.

"Abandonment" was identified as a theme in 10 of the interviews. Eight of the interviews depicted photos of abandoned houses or yards. One of the photos showed an empty playground, and one showed an abandoned storefront.

There were three photos in the "refinery" theme, all showing refineries in west Tulsa. No interview text was coded as "refinery," but one participant includes a lengthy discussion about the problems her neighborhood faces due to the nearby refinery.

There were two photos with the theme "sex oriented business." One of the photos was of a motel sign, and the other was of a neighborhood bar.

Vices

During the charette, the research team noted while categorizing the Unhealthy Place photos that many of these photos represented the participant's negative reaction to personal vices (sometimes their own, but usually those of others) that were affecting themselves, their homes, or their neighborhoods. In response to this insight, the research team coded the interviews for "vices," defined as "participant describes environment as having alcohol, cigarettes, sex-oriented business, etc." The team also include comments about drug abuse and food (eating unhealthy food or fast food, for example) in the "vice" category. Other themes in "unhealthy place," such as abandonment and safety/crime, and were not coded as "vices."

Analysis

For the purposes of statistical analysis, the research team grouped the different themes into four categories:

Vice – liquor, cigarettes, bar, drugs (12 interviews)

Environment – trash, refinery, abandoned buildings (11 interviews)

Unsafe place –crime, gangs, theft, unsafe location (21 interviews)

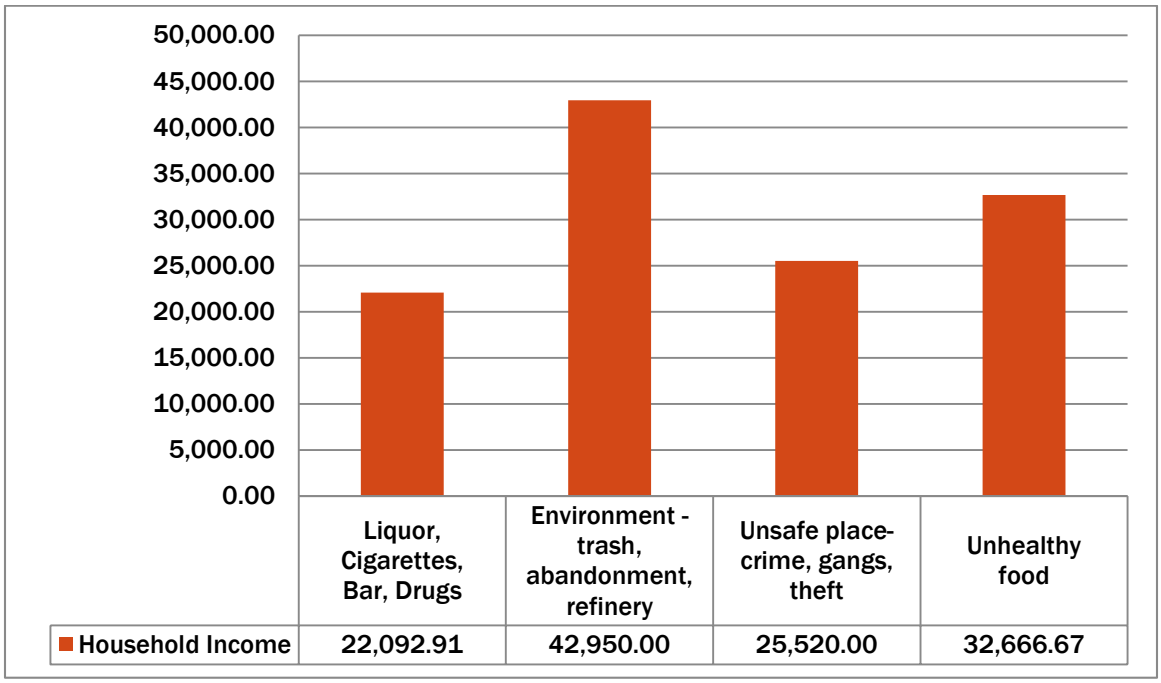
Unhealthy food – Whataburger, etc. (4 interviews)

The team looked at the mean of household income, self-rating of health, and education level, and compared these to the type of unhealthy place that the participant reported.

Those who reported vices as unhealthy places (11 participants) have lower incomes (a mean of $22,092.91) compared to participants who reported other kinds of unhealthy places. The next lowest is those who reported unsafe places (20 participants, mean income of $25,520.00).

The following graph illustrates the different categories of unhealthy place compared to income.

Figure 14: Unhealthy Place by Household Income



There were also differences in responses due to the education level and age of the participant. Younger participants were more likely to choose vices as unhealthy place than were older ones; older participants tended to see unhealthy food as their unhealthy place. Similarly, participants with the lowest level of education chose vices as their unhealthy place, and participants with higher levels of education chose unhealthy food.

Figure 15: Unhealthy Place by Level of Education

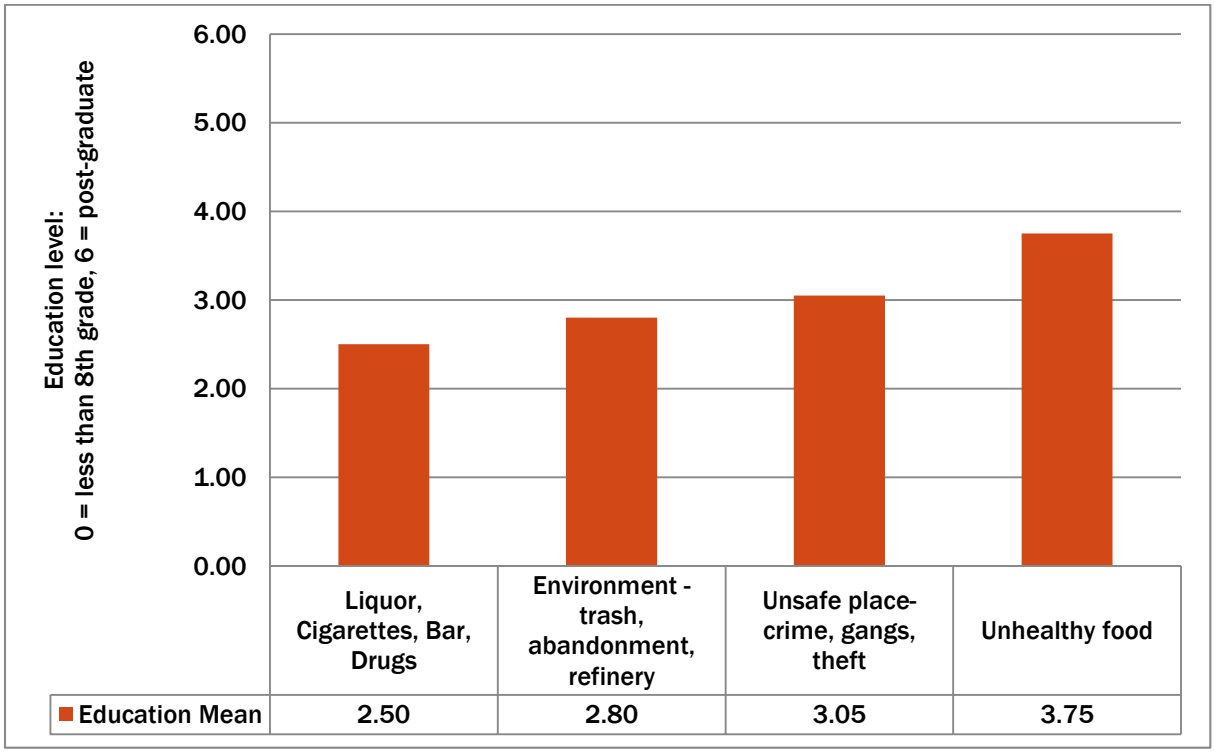


Figure 16: Unhealthy Place and Self-rated Health

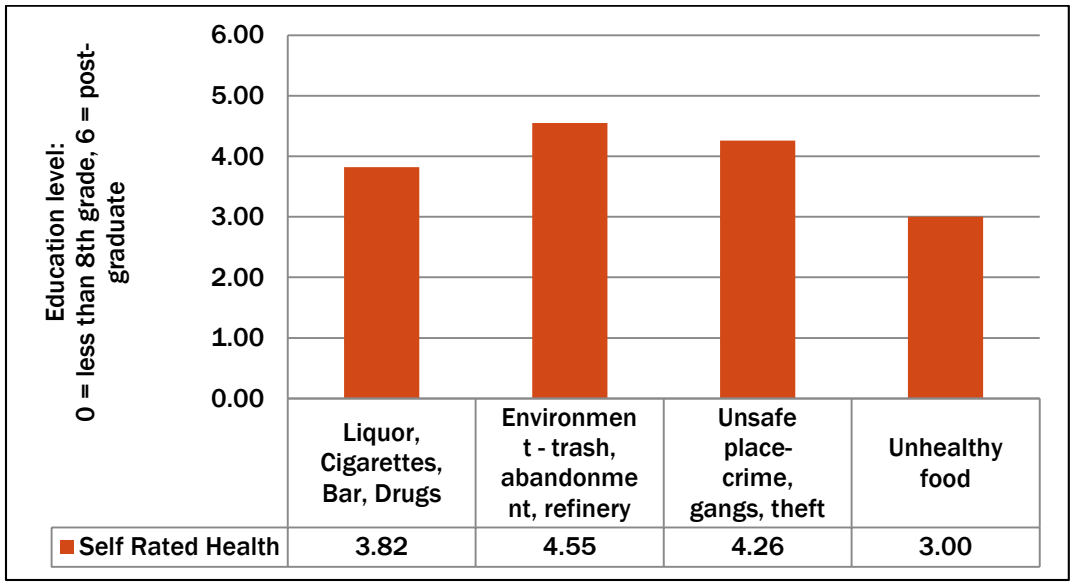
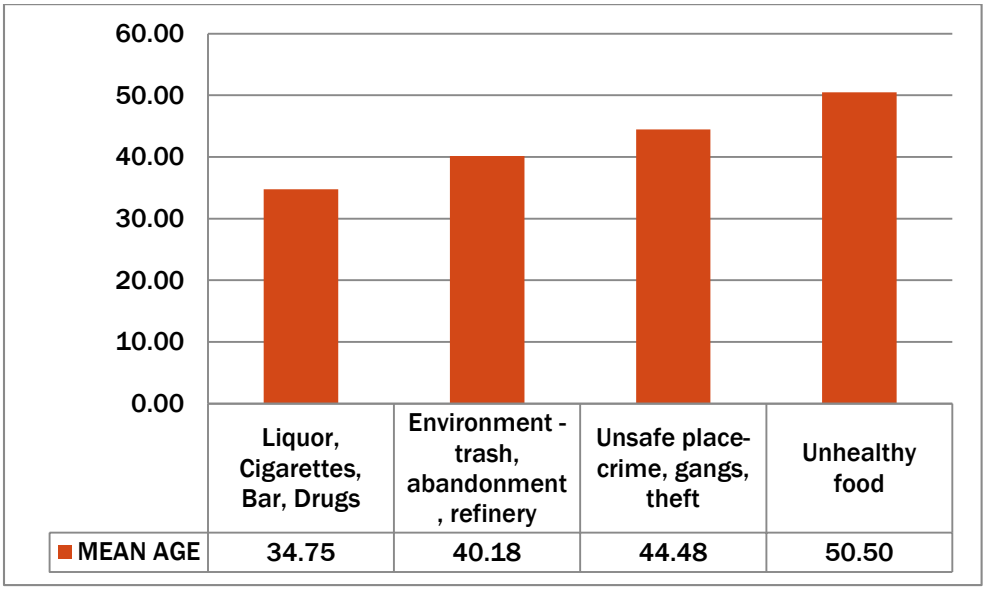


Figure 17: Unhealthy Place and Age



Socialization

Participants were asked to take a picture of where they go to socialize. They took pictures of places and of activities they engaged in and discussed these photos during the interviews. Analysis revealed some common themes from respondents that these places or events for socialization included places of worship, inexpensive entertainment, community centers, bars or restaurants, volunteering, and spending time with immediate family. There were some individuals who discussed feeling unsafe in their neighborhoods and had little opportunity to socialize.

Places of Worship. There were 29 (55%) participants who referenced their religious beliefs or place of worship for a combined total of 330 times. Many of the participants indicated that their primary place and source of socialization was through their church community and related church activities. Included were statements that suggested that their church community was "family" and a

very important source of social support: "Sometimes is the same guys, guys from my church. . . We more like a family, we do things family wise. We go shop together, we have dinner together, or movie night. There's just a lot of things we do with family." In several interviews, the participants indicated that their church family had evolved into their surrogate family and that their church was the focal place for socialization and contributed to keeping their immediate family together: "I'm a Christian; I go to Christian Victory Center. . . . It's a huge church. We have people from all nations who go there… That's where my wife and I, we live there part time.. We are kind of like a community. Everybody bring, you bring this, kind of like a potluck. That's our tradition. When it's over, everybody takes something home. Nothings left. It always goes."

Inexpensive Entertainment. Some participants interpreted socialization to mean being able to partake in forms of paid entertainment for themselves and their families. A number of participants indicated that their inability to pay for entertainment restricted their options for socialization with family and friends to just watching TV and staying home: "We go to the library and I drop her over at a friend's house or we go to a movie. That's about it. I mean we don't have no money. We just stay at home."

Community Centers. Only three out of 53 participants mentioned non-religious community centers such as the YMCA or senior centers as a place for socializing with other people: "That's what I do to socialize, I go to the local Y."

Bars/Restaurants/Coffee Shops. Six of the 53 participants revealed in the interviews that they regularly frequent a certain restaurant, bar, and coffee shop establishments as their way to socialize with friends, family, and locals in the community. Socialization was seen as the primary reason for going to the establishment: "This is the meeting place. Ribcrib is across the highway from where my office is. If there is someone to meet, this is where I go. My family enjoys Ribcrib. My wife's parents introduced it to us years ago. When we lived out of state we would always go to Ribcrib down in Harvard actually to eat. It's really, it's kind of the gathering place in that sense for me."

Volunteering. About 10% of the participants indicated that they enjoyed volunteering at schools and other places in their community and considered their volunteer experiences as a form of socialization: "Well, I was gonna take a picture of the school because I hang out a lot here." For some it was the primary avenue for socialization: "Well this picture of the VFW I am proud to say that I do volunteer work for Veteran's at the VFW and our friends are there, and that's our social. We go there for parties and events and help them raise money."

Spending Time with Immediate Family. Some of the participants indicated that they prefer to just socialize with people within their immediate family: "That's how we socialize, more with our family….just our immediate family. Our socializing is mostly with the same little group." For various reasons, they do not seek opportunities to socialize outside the boundary of their family: "Well, I'm a mom so, that's my first thing. Whatever I can do with my daughter mostly. Being a mom especially of two young ones, you kind of lose yourself. . . . It's all about my daughters."

Feel Unsafe to Socialize/Lost Sense of Community. Some of the participants reported feeling it was unsafe to socialize with family and friends outside in their communities and neighborhoods due to crime and being unfamiliar with in neighbors: "My husband and I walked a lot. He has neuropathy now, he didn't get out but, when it gets cool at night I think about walking, we have a lot of gangs that walk at night and kids with guns and stuff now. Yeah, I mean, our kids they used to stay out until 10:00 at night or something. And then you'd call so and so house, "send them on home", and then you'd walk the whole square mile. It's just changed a lot."

In addition to feeling unsafe, some of the participants expressed a desire to have connections with people in their neighbors similar to those they remember their families having when they were younger: "That's the thing with the street now, used to know the neighbors and you'd sit out at night and talk and have ice cream, you know, ice cream and fry burgers and stuff out in the charcoal. Now then, you may see them passing by and wave at them. People are [pause] they don't want you to know their business and you don't want them to know yours anymore."

Social Relationships

Participants were asked to take photos of when they commonly socialized. Through conversations about socialization, many participants revealed a rich network of friends and families who they assisted or who assisted them in a variety of ways on a regular basis. Throughout the interviews, many participants spoke a great deal about the importance of relationships in their lives. Given the centrality of relationships as noted in the interviews, transcripts were coded for themes related to relationships: social exchange (instances of exchange or mutual support), pets, friendships etc.

The interviews reflected a two-way exchange of support: narratives in which participants reflected on experiences of helping others and in which participants reflected on receiving support from others. Narratives also reflected various types of exchange: emotional support as well as instrumental and financial support.

Helping Relatives. Many participants indicated that they received help and gave help to their family members: "I raise two, no one of my grandkids, no, two of my grandkids and my son. I raise them, and the other two are my daughter's kids and I bring them all back and forth to school every day." Some noted stories of moving in with family members to help them, providing assistance with child care, care giving to adults, or grocery shopping: "Yes we drive, I always pick up my brother and he's kind of sick, so I take care of him. So when we go shopping I pick him up and we go shopping."

Helping in the Community. The interviews also reflected on helping others through missions or through church, lending a helping hand to neighbors, and helping out at the community school (at a book fair, helping to mentor kids in reading): "Involved with church, involved with school, I do girl scouts, umm I volunteer with an animal rescue organization, umm, I have my kids involved with the city council type things and um (wow) and doing things with various elderly organizations."

Receiving Help from Others. Some participants talked about receiving help from others, including finding a missing pet, providing transportation, translation, financial support, and a general shoulder to lean on: "I had a friend who would help me in Spanish for me for to call transportation services like a chauffeur. I would ask, I need to go to the clinic what is the number I need to take to get there. She would tell me which bus to get on and wait for."

Getting Help from Church. Many participants found significant help from their pastors or minister: "My pastor has been that shoulder that I've needed. Yes, he kinda took the dad role. You know, that support is there if I need it. But I try." Other church members were also a source of help: "Absolutely. Not only would we get help from that family, but several others in the church. Mmm hmm."

Help from Neighbors. In contrast to comments from some participants who did not feel a sense of community in their neighborhoods, other participants indicated that they could rely on their neighbors for help: "Everybody really pretty much watches out for each other and we pretty much, you know. We're always, ya know. . . . If we're seeing different cars coming down the road, we make sure that we let the dog out."

Pets. During the interview when participants spoke about various relationships within their social environment, about twenty five percent of the participants included discussions regarding their personal relationships with their pets and the value their pets add to them and their family: "He's the joy; he's just the joy of my life. I'll tell you what: it's just, uh, he is something else."

In fact, some participants described their pets with human traits and qualities and indicated their relationships with their pets are similar to their relationships with people: "Uh huh, but we got her in a garage sale and it said Chihuahua $75, so no papers, but she's the sweetest thing ever. She's my baby….Yeah, right, right, my baby."

A few of the participants described their relationship with their pets as a form of social exchange for safety and security to their living environment, and described the advantages outweighing the inconveniences and costs of pet ownership. "We now have a cat that has adopted us and we have no rats and mice, praise God for the last year and a half. I am very thankful for that cat. So we feed that cat, and he works pest control."

A small number of participants expressed concern about loose dogs running in their neighborhood and felt fearful to walk on their own streets for fear of being attacked and bitten: "There's some pretty scary ones around and you don't know what day they are out or what time of day or whatever. If they are being let out or are running loose. We had one follow us all the way home, about half a mile. And, he scared me, came up behind me and scared me."

Transportation

Participants were asked to take a picture of how they get around. Review of the photographs and interview responses suggest three important themes: a high degree of automobile-dependency for transportation, a personal and anthropomorphic attachment by participants to their vehicles, and the overall vision of a mobile community untethered to a place.

Automobile Dependence. Forty-seven of the 53 participants submitted a picture of their vehicle or related image. From these, 11 showed sport utility vehicles or light trucks, and 11 showed mini-vans. The high number of these types of vehicles may be due to the fact that many of the participants have small children in school. Two participants submitted pictures of public transport, two more indicated walking, and one each indicated biking and horseback riding. The high number of automobile images correlates well with transportation studies conducted by local planning agencies . Those studies showed Tulsa's population's overwhelming dependence on personal vehicles for traveling around the city versus using public transportation. The low density distribution of population in the city, the segregation of different land uses by zoning, and the low level of service provided for pedestrians all reflect policy decisions that contribute to the automobile dependency evident in the photographs and testimony.

Review of photographs from other categories seems to back this view up as well. For instance, only thirteen of fifty-three neighborhood street images show sidewalks and only one shows actual pedestrians walking in the street. An image from the Unhealthy Place category shows a child walking through a drainage channel to school. Participants also exhibited auto-dependent behaviors and attitudes. Images show people eating in cars, frequenting drive-through windows at restaurants and stopping at convenience stores. The vast majority of photographs asking people where they get their food consisted of pictures of grocery store parking lots. When asked about their time spent driving some participants indicated they are always on the go: "i would say in a typical day, I probably spend at least three hours (wow) in a car." Some almost considered their vehicle a second home: "This is a big part of my life, I drive everywhere I go." Any kind of personal vehicle, however unsatisfactory, was regarded as better than public

transportation: “Well, uh, this is how I get around. I wish we did have better means of transportation, as far as you know, um, but the public transportation here sucks. It has always sucked.”

Personal attachments to vehicles. With participants spending a significant amount of time in their vehicles, some seem to form personal attachments to them. Many refer to their vehicles as “my car” or “my wheels” as if they were an extension of their bodies or their personalities. Others anthropomorphized, calling the vehicle their “baby:” “And this is my husband’s baby, his Suburban.” To others, the cars seemed to be a great source of pride or accomplishment: “Our cars have names. This one is called Madame Blueberry. That’s mine. And that one is Black Beauty. And the kids just call that one the Suburban mama, the Suburban.” Participants exhibited loyalty to certain brands or performance attributes of their vehicles such as reliability, fuel economy, and comfort.

High mobility leads to Placelessness. All of the pictures of and responses about transportation combined with mapping information about participants’ routes to food stores and health-care providers indicate a highly mobile community where people must travel widely to obtain goods and services, get to work, or engage in recreational activities. This mobility seems to have led to *placelessness* and, in some cases, a feeling of social isolation by participants. “Place” can be understood as a built environment with a relevant and visible history, a unique identity, and the presence of many social connections. Photographs of neighborhood streets depicted a high level of uniformity and little that would provide a unique identity. Participants would have a hard time identifying specific neighborhoods by name from anonymous images. Neighborhoods in Tulsa tend to be residential in nature and not integrated with other functions of the city. This characteristic limited the number of possible social connections and chance encounters in a small geographic area. The lack of a sense of place and a concomitant lack of street life also seems to have contributed to social isolation and limited social capital creation, which is examined in the next section of this report.

Neighborhood

Analysis of data collected from participants’ photographs in combination with the data collected from the “neighborhood” and “socialize” categories revealed a strong correlation between the absence of street life and limited social capital in the Tulsa community. Social capital refers to the effects a community’s social networks can have on the community itself. The concept was made widely known by Harvard public policy professor, Robert Putnam (2000), author of the book, *Bowling Alone*. *Bowling Alone* explores the nation’s great decline in citizen involvement and a weakening of social ties since the 1950s. The result has created isolationism among American citizens, resulting in a devastating effect on the nation’s communities. According to Putnam, social capital is essential in creating a society that thrives, both economically and culturally.

Street life refers to pedestrian activity occurring in outdoor public places in a community. A public place may be defined as a road, sidewalk, park, plaza, and so on. The significance of street life was originally observed by Jane Jacobs (1961), author of *The Death and Life of Great American Cities*. Jacobs dedicates an entire chapter to the use of the sidewalk as a gathering place. She stated “The social life of city sidewalks is precisely that they are public. They bring together people who do not know each other in an intimate, private social fashion and in most cases do not care to know each other in that fashion” (p. 55). She emphasized that this type of casual contact promotes a common identity among residents, encourages reciprocal trust among neighbors and personal investment in the community.

The first data set examined were the participants' photographs of their streets, wherein researchers simply surveyed the pictures for evidence of street life. When assessing street life, researchers looked for residents participating in recreational activities, use of public space, pedestrians, and neighbors socializing. Secondly, researchers examined the participants' photographs of how they socialize for evidence of social capital. Evidence and classification of social capital was determined by examining the photograph's' captions as well as demonstration of social interaction. The third data set was the thorough reading of the "neighborhood" node. (a data set can't be the action of reading. The data set is the info in the transcripts.) Researchers perused the transcripts of the "neighborhood" node for participants' mention of street life in their neighborhoods, use of public space, and participants' relationships with their neighbors, and their community involvement. Investigation of these topics within the neighborhood node confirmed the presence or absence of street life as well as social capital. The final data set came from the exploration participants' methods of socializing as stated in the "socialize" node. Researchers looked for evidence of bridging social capital as well as bonding social capital. Each participant shared the various ways he/she socialized with friends and family, as well as how that person socialized within his/her community.

Of the participants' photographs of their streets, only two of the 53 photo tiles displayed evidence of street life. Participant photographs of how they socialize included evidence of social interaction (people visibly socializing in photographs), evidence of bonding social capital, evidence of bridging social capital, images of public places used for socializing, images of churches and other institutions used for socializing and the lack of any people in a photograph. Responses were divided into three categories of street life/use of public places, neighborhood interaction, and community involvement.
In order to analyze street life, researchers examined participants' photographs of their streets, wherein researchers surveyed the pictures for evidence of street life, while referring to interview transcripts to gauge participants' perceptions of their neighborhoods. When assessing street life, researchers looked for residents participating in recreational activities, use of public space, pedestrians, neighbors socializing, etc.

When asked to take pictures of their streets, participants' methods of photography varied. Most photographs captured a perspective view of their neighborhood street (a street in its entirety), while others captured a limited view such as a neighborhood sign or a personal dwelling unit.

Table 18: Neighborhood Photographic View

Photographic View	Frequency
Perspective View	31
Signage	9
Dwelling Unit	7

Although 22 of the 53 photographs taken provided a limited view of the street, the majority of participants' streets suggested that street life in Tulsa is nearly nonexistent. Two of the 31 perspective-view photographs displayed evidence of street life. During their interviews, participants provided various explanations for the absence of street life in their neighborhoods.

Crime. A number of participants stated they did not feel safe participating in recreational activities in their neighborhoods due to perceptions of high crime rates: "I don't let my kids go to the park. I try to keep them close by where I can see them."

Environmental Conditions. Participants residing in one particular area of town perceived their environment as unsanitary: "Sewage backup. My kids caught staph playing in the grass down here." They also perceived this area to be hazardous to one's health: "You could not have the windows open...our dogs would not last no more than 4-5 years outside. They would die. The yellow dust was sulfur. You couldn't even go outside. It smelled like rotten eggs. Kids couldn't even go out and play."

Inaccessibility/Lack of Public Space. Several participants claimed that their neighborhoods lacked the necessary infrastructure to participate in outdoor recreational activities (i.e. - sidewalks and parks): "There's no safe place for any of the children in this neighborhood to even ride their bikes."

Researchers then examined interview transcripts to determine why participants are hesitant to engage in social and recreational activities within their neighborhoods. Common themes found were isolationism, reluctance to engage in contact with the unfamiliar, and resident mobility: "Yes. Ethnically it's changed a lot. It's very transient. That's the thing with this street now." Sometimes the participant acknowledged that he or she was not eager to engage with neighbors: "I'm not the friendliest person. I'm not very active. I wave and say hi and go on my way. As far as visiting, no, haha." Other times, the participant was able to identify the perceived roadblocks to engaging: "The Hispanic community has grown so much here and there's a huge language barrier." But other participants gave no particular reason for not engaging: ""We have a blended neighborhood. But nobody goes to anybody's house for coffee. We don't go to each other's houses but we're friendly and we talk over the fence."

The absence of the city's street life, as observed in this study, can be attributed to several factors including residents' perception of crime rate, hazardous environmental conditions, insufficient infrastructure, lack of public space, isolationism, mobility, and fear of the unknown.

Participant Relationship with Community School

Participants were asked to talk about their relationships with the community schools in which the interviews were recorded. No clear pattern in the use of words or phrases emerged. However, the contents revealed the participants' desire for the success of community schools in educating children. Those that were active volunteers (either through their neighborhood associations or churches or as individuals) in the schools spoke more passionately about their schools and sympathized with working parents who could not participate in the school activities. They also acknowledged the demographic shifts that are occurring within their communities and the impact in community relationships. Their responses were sufficient to suggest, like many other parents with school-aged children, they are concerned about safety around the community in which the schools are located. They also wanted the schools to improve their academic performance and teacher retention. Only one participant spoke eloquently about the community school coordinator. In addition, they wanted the schools to be active in the community with the goal of the community becoming active within the schools.

Major themes that emerged are highlighted below:

Turnover. The interviewees expressed concern about high turnover rates of students and teachers in some schools, which may affect learning of students. Not just a local issue, high turnover rates among students and teachers has become a national issue in many school districts.

"Walking school buses" and an impact on tardies and absences. Currently there is a national effort to encourage more children to walk to school. One participant pointed out an effort at the local level which could positively impact tardiness and absenteeism, as students may be motivated to be part of the "walking school bus caravan": "Wednesday mornings, they do a "walking school bus" where the teachers will go out into the neighborhoods to kinda walk the kids into school. They do go out into the neighborhoods and bring the kids, you know, and the idea that there's a lot of tardies and absences within these schools."

Partnerships. The participants mentioned various types of partnerships between schools, parents, and the larger community.

(a) School/Parent/Community Partnerships. Participants spoke about the school reaching out to engage parents and community members, positively impacting those relationships. For example, as one participant pointed out: "I partnered with Remington. I'm doing parenting classes this year once a month for the parents and staff."

In addition, parents are able to recruit their associations/organizations to participate in school activities: "We do one of their afterschool programs. And we got an award, got voted 'Volunteers of the Year' here at Mark Twain. And then TPS gave us an award, for you know, going beyond the call of duty."

(b) School/Institution Partnerships. This partnership involves the delivery of critical services to schools by other institutions. One participant noted: "OSU and OU provided some very needed healthcare for parents and for children and for teachers that are part of that staff. They have a nurse in the school, those schools that are taking part in it. OSU and OU have a facility in the school which allows for a nurse for the initial shots for the children to go to school, illnesses of any kind, sickness."

(c) School/Faith-based Partnerships. One participant mentioned a partnership between the community school and a local church to deliver specific services to students: "We have a Project Transformation Reading Camp that the school participates in at the church around the corner."

Overcrowded schools. Not limited to local experiences, one participant noted over-crowding in the schools: "This school and Boevers and Briar Glenn are the three schools that are most overcrowded."

Volunteering. Some participants mentioned barriers that are preventing some parents from actively volunteering in the schools and helping during school activities: "A lot of the times you have single parents that have to work, they can't volunteer…you may have two working families, and you know two working parents, they just can't afford to take time off to volunteer and do things."

Work

Participants were asked to take a photograph of where they worked. In addition, participants were asked about their work during the interview and as a part of the short demographic questionnaire.

Data reveals those who are working full-time have the highest reported income, followed by part-time workers who make 48% of those working full-time. While retired and unemployed workers were the largest group in the study, their reported income is only 37% of the income reported by full-time workers.

Table 19: Employment Status and Income

Employment Status	N	Mean
Full-Time	15	$47,300
Part-Time	11	$22,727
Unemployed/Retired	22	$17,661
Total	**48**	**$28,085**

Participants who were working full-time also reported higher personal health ratings and higher levels of educational achievement. On average, those who were unemployed or retired expressed 26% lower personal health ratings than those working full-time, as noted in Table 20.

Table 20: Employment Status, Education, and Personal Health

Employment Status	N	Education Level Mean	Personal Health Rating Mean
Full-Time	15	3.20	4.733
Part-Time	11	2.77	4.333
Unemployed	22	2.83	3.600
Total	**52**	**4.149**	**4.149**

Another finding from the data was nearly 60% of those who are working full-time or part-time do not have health insurance, suggesting that employment status is not always a reliable predictor of an individual's health insurance status.

Table 21: Employment Status and Insurance Status

Employment Status	Insurance Status	
	NO	YES
Working FT or PT	10 (58%)	18 (54%)
Unemployed/Retired	7 (41%)	17 (49%)
Total Count	**24 (46%)**	**28 (54%)**

Upon further comparison between employed and unemployed participants, the data revealed that 76% of the non-working participants received their primary healthcare from a community health clinic, compared with 4% of working participants.

Table 22: Employment Status and Community Health Use

Community Health	Employment Status	
	Not Working	Working
Utilizing Community Health	13 (76%)	4 (24%)
Not Utilizing Community Health	10 (30%)	24 (70%)
Total	**23 (45%)**	**28 (55%)**

Data was analyzed between the working and non-working groups to determine any differences in grocery shopping locations. This analysis revealed that 72% of participants who shop at Warehouse Market are not working, while 37% of the participants who shop at Wal-Mart are not working. 100% of those shopping at Whole Foods were employed, while all but one participant who shopped at Reasor's was employed. Only two participants who were unemployed or retired shop at non-chain, local grocery store.

Table 23: Employment Status and Grocery Shopping

Grocery Store	Employment Status	
	Not Working	Working
Warehouse Market	13 (72%)	5 (28%)
Wal-Mart	6 (37%)	10 (63%)
Reasor's	1 (17%)	5 (83%)
Whole Foods	0 (0%)	2 (100%)
Other Chain	1(25%)	3 (75%)
Local	2 (33%)	4 (68%)
Total	**23 (45%)**	**28 (55%)**

Employed in Tulsa Public Schools. Within the work category there were nine specific sub-categories that emerged in the participants' interviews. One of the highest mentioned places of employment was in the Tulsa Area public schools, specifically, Mark Twain, Cooper, Burroughs, Bryant, and Remington, with jobs ranging from custodial positions to teaching in the classroom. All of the participants who mentioned working in the school system expressed positive experiences, and most participants referred to opportunities for improvement and advancement within the system: "When I started working here, I worked as a TA and I worked in the old school. And then

they tore the old school down and built this and then I started working in here. I came here as a TA and then I took over as a daycare director for the staff."

Non-Professional Service Sector Industry. Another theme was employment in the service sector industry. Nearly 15% of the participants work in non-professional occupations such as retail sales, grocery store clerks, and home and industrial cleaning. The overwhelming majority of the participants who work in the service sector indicated that these jobs were only temporary until they graduated from a higher learning institution. Some participants indicated choosing these occupations due to family commitments and responsibilities. Participants working in the service sector more often reported having to work multiple jobs and long hours: "And I actually have 3 jobs…. And my third job is in retail." They report sacrificing time with family to in order to earn a living: "It is that I do not like working so late in the evening. I am very tired a lot of the time. … I am not with my boy much because I work. When I have time for the classes, I go. My son will need to have his homework done and I will not have very much time. The same with my husband, I do not see him in the day. Until I return in the night, they are both asleep."

Disabled Workers. Just over 11% of the participants reported being disabled due to a physical or mental health diagnoses, or work related injuries. Some of the participants who are disabled took pictures of their activities within their daily lives such as cleaning and working on the computer. Although these participants stated being unable to take part in paid employment for various reasons, these pictures helped participants demonstrate their capacities and desire to work.

Figure 18: Photographs of Participants with Self-reported Disabilities and Work

Table 24: Employment Categories

WORK CATEGORY	Frequency	Percent	RANK, by frequency
Education	8	14.8	1
Service	8	14.8	1
Homemaker	7	13.0	2
Social Service	7	13.0	2
Disabled	6	11.1	3
Office	5	9.3	4
Retired	4	7.4	5
Other	3	5.6	6

Unemployed	3	5.6	6
Volunteer	3	5.6	6

Table 25: Employment Type Rank by Household Income

Job Category	N	Mean
Other	2	$87,000.00
Office	5	$39,000.00
Social Service	7	$33,357.14
Retired	3	$30,333.33
Service	8	$28,375.00
Education	5	$28,000.00
Volunteer	2	$25,500.00
Homemaker	7	$19,646.00
Disabled	6	$16,366.67
Unemployed	3	$279.33

Homemakers. Homemakers made up about 13% of the participants in the research project. Some of the participants indicated that they are involved in volunteer activities in their children's' schools on a regular basis: "Well you know we was thinking about it, and I do a lot of volunteer at the schools and I was thinking about doing that, but then I thought, you know, and my husband was like well why don't you do that, because that's really what you like to do. And I love to volunteer but it's more for my kids." They are electing not to work outside the home for pay to have more opportunities to be involved in their children's education: "Right now I stick with them at school, you know I don't work, so when I am home I come up to school, I spend time in their classes, you know, and volunteer and stuff like that all the time. The more I'm with them up here the more they're gonna like school, the more that they'll want to success in school and that's really…I figure if they can finish school they can finish anything. You know, and that's kinda my goal. But that's kinda my goal for them, that's not really for me, and I don't have my GED so I figure by the time they get up there I want to be able to say 'Hey I went back, I did fix this, I made a mistake when I was young, but now I've overcome it,' you know?"

Social Services. Approximately 13% of the participants reported working at government and non-profit social service agencies, many of which were affiliated with religious institutions. Participants who mentioned working for social service agencies averaged making about $33,000 per year and indicated that their decision to help others and improve the local community outweighed the importance of making a higher income. The places where the participants mentioned working in social services were the Oklahoma Department of Mental Health, King James Christian Learning, C.O.R.E Center, Life Senior Services, Connecting Fathers and Families, and Planned Parenthood.

Benefits of Project to Photovoice Participants

Due to observations of those involved in the project throughout the process and several debriefing sessions, the team was able to identify positive participant outcomes. These are highlighted below.

Increased Advocacy/Empowerment of Participants. Some of the TACSI coordinators reported noticing some changes in the Photovoice participants. For example, one remarked that one of the women in the study was "holding her head higher than ever before" and that another participant was truly grateful for the ability to have his voice heard. "And I think that happened with a lot of their questions and concerns about different areas of town, and especially health care. I think health care was a big part of their concern and being able to voice it and getting positive feedback, really let them know that people are listening, that changes are going to happen and that they don't have to feel hopeless and I hate to use empowerment all the time, but that they also made a difference. By them doing that, they participated in helping make a difference. Part of the future growth and change in Tulsa for the good."

Increased presence at Community Schools. Some of the TACSI coordinators noted that after participating in Photovoice, some parents became more involved at the school or had changed in their presentation: "But after going through everything and at the end, you know like you said, she walks with her head up and her shoulders up. She doesn't stand outside of the office waiting for someone to ask her in, she feels like she can come in, like she's part of everything, and I think she feels like she can actually get something done."

Ability to be Heard. One of the strengths of community-based research is the enhanced capacity for research subjects to become transformed into active participants: "Well I think from a listening session, from my perspective, it went fantastic. They felt that they were listened to, that everyone cared about them, that they wanted to hear the information, so they felt secure, valued, and that what they said would be used for a purpose that would fulfill their reason to even come and talk to you. They thought that something would be done, it would go somewhere. And one OU nurse person did follow up with a resource for that family, that person, and she needed that information and would like to continue to communicating with that OU person." Many of the participants as well as school coordinators noted that this was one of the most important aspects of the Photovoice project: creating opportunities for individuals who are normally on the 'outside' a place to be heard, valued, and appreciated: "Yeah because our folks were the experts on what they were trying to find out and they treated them like they were the experts. And when you have a doctor that treats you like an expert, that's pretty cool."

TACSI School Coordinator Feedback

Approximately a month after the interviews, members of the research team conducted a de-briefing session with the TACSI School Coordinators. One of the questions asked of the coordinators was what they learned from the participants about the communities. Many of the responses from the coordinators were similar to what was noted in the data analysis of the interviews and photos taken by the participants.

Environmental Hazards. Several of the participants took pictures of environmental hazards such as drainage ditches, unsupervised swimming pools, standing bodies of water, and abandoned houses to describe an unhealthy place in their neighborhoods. An unexpected finding in the interviews revealed many of the participants felt uneasy about taking pictures of places they considered *dangerous* or *unhealthy,* and several expressed concern about possible repercussions

for identifying unsafe areas or business practices: "I was surprised…. She said "I can't let her see me taking a picture. I can't let anyone know I'm taking a picture." It was really dark and she went out there undercover, and the fear, you know, it was just, I asked, "What's the reason?" and she said "Oh I could get kicked out, I could get in trouble. If they know that I am doing something that they might get in trouble. I was like, you know, here's a huge, a pit, a danger, and she's afraid to do anything about it because she intimidated, that's what it is, the intimidation factor for an apartment complex for a resident, I was like no, we can't allow this, this is ridiculous."

Healthcare Access, Individual Healthcare Issues and Needs. Prominent throughout the interviews of the participants was the theme of access to health care. Many of the participants expressed lack of health insurance, ability to pay, difficulty and quality of health care, and long waiting times. Therefore they elected to use a form of self-care such instead of seeking professional health care. Students and faculty were provided opportunities to listen to first-hand personal stories about the struggles and limitations for many people to acquire adequate health care: "One of the things that struck me, since I guess I'm privy since I actually have our tiles, is that none of our folks took, like where do you go for healthcare, none of them took a picture of a doctor's office. It was like a massage parlor, or their bed, that was just really interesting to me that none of them, it wasn't a medical plaza or anything it was interesting." The limitations included participants' perceived lack of choices about their health care: "I think for me it was just more involved knowledge about health needs, because for me I learned about a family that the guy has posttraumatic stress disorder and the wife is diabetic now without any legs, use of the arms, and she's going blind. So and the daughter also came in, and she has no health insurance and she's helping take care of them. It made me more aware that in the community, behind the doors, in the quiet neighborhoods, there may be a lot of needs and they can't get out to tell anyone about it." But the limitations also included lack of knowledge about their healthcare options as well: "I think when talking about healthcare, about going to get it, even when I was asking participants there seemed to be a lot of fear, like what am I doing, I don't know, so there seemed to be a lot of fear (hesitation) and I think that could be transferred into going and getting help from people who really don't know. And I think a lot of them did it because they knew us, but if they hadn't known us, I think there was a relation there (trust, yeah) between their fear of doing something like this and going to get healthcare. So that was just something that was something that I felt I learned during this process."

Summer Institute Participant Feedback

New Interactions. One of the unique aspects of the Tulsa Photovoice project was the number of individuals who participated. As mentioned earlier, there were over 200 people involved in the research. In addition, the nature of the research facilitated interactions between faculty and students in the School of Community Medicine and individuals who reside in the neighborhoods served by the health clinics. Further, the interviews were conducted in the neighborhoods where many patients live, providing another opportunity – for faculty and students to meet and interview participants in their neighborhoods in a community setting. This also presented the researchers an opportunity look at the outcomes of participation. At several stages of the process, the research team was not only collecting data for the project, but also gathering data regarding the impact of the process on the attitudes, knowledge, and skills of all those involved in the project.

By creating opportunities for dialogue, particularly in natural settings, opportunities for interaction and reflection were many. Individuals on both sides of the interviews (participants and interview team members) reflected that there was value in conversing with people that they may not

normally meet. For students and faculty, this meant moving away from a clinical or diagnostic approach. For participants this meant having an opportunity beyond the typical 15 minute physician-patient clinic encounter to share their insights about their community and its health to future and current health care providers.

Exchange of Social Capital. Social exchange theory describes human interactions as an occasion for people to establish a reciprocal relationship where both parties can benefit from building social capital (Hawkins and Maurer, 2011). When groups and individuals interact with one another there is an opportunity to experience social exchange through the development of interpersonal connections. Certainly, in this project, opportunities for this exchange happened at multiple times throughout the project. For PV participants, they were able to define their own experiences and express their concerns and solutions. School coordinators were able to learn more about the parents living near their schools and to witness their contributions to the project. And finally, participants in the Summer Institute were given the opportunity to meet individuals with whom they might not otherwise interact, especially in an informal setting. Such interactions, on both sides, provided opportunities for individuals to frame or reframe how they consider the issues they face, experience shifts in their perspectives about certain neighborhoods, individuals living in such neighborhoods, about doctors, or about the university. All participants had the opportunity for giving and finding voice, learning to listen to others, and appreciating diverse perspectives. Following is an example of a SI participant's reflection regarding their interview: "I was given the opportunity to get to know someone who lived in a neighborhood that I may not visit otherwise. There are a lot of great people in this city in several neighborhoods. Some problems and issues faced are like those I face, some are a lot more complex."

Some of the Community School Site Coordinators reported that they noticed some changes in the Photovoice participants. For example, one reported that one of the women in the study was "holding her head higher than ever before," and that another participant was truly grateful for the ability to have his voice heard, and that participants felt 'honored and valued." A coordinator noted: "I think healthcare was a big part of their concern and being able to voice it and getting positive feedback, really let them know that people are listening, that changes are going to happen and that they don't have to feel hopeless. And I hate to use empowerment all the time, but that they also made a difference. By them doing that, they participated in helping make a difference. Part of the future growth and change in Tulsa for the good."

One of the strengths of community based research is the enhanced capacity for research subjects to be transformed into active participants. Many of the participants as well as school coordinators noted that this was one of the most important aspects of the Photovoice project: creating opportunities for individuals who are normally on the 'outside' a place to be heard, valued, and appreciated. "Yeah because our folks were the experts on what they were trying to find out and they treated them like they were the experts. And when you have a doctor that treats you like an expert, that's pretty cool."

Research Methods by Participation. One of the goals, particularly for the Summer Institute participants, was to learn about community based participatory research. In this project, they are part of the research project and learning by doing, and such learning experiences tend to be more powerful and produce longer lasting knowledge.

Strength, Resourcefulness, and Resilience. Many of the students in the Summer Institute made comments in regards to the potential strengths, resourcefulness, and resiliency of the community. This revelation, familiar to those who work with neglected or disenfranchised communities, was for

many of these students a powerful discovery. For instance, here are two comments made by SI student participants:

"There are so many good people in City Y who work so hard to get by on so little. I don't know how they do it. Neither of the people I interviewed had cars and walked everywhere. Impressive."

"My team thoroughly enjoyed interviewing our two community dwellers. We saw first-hand the struggles that lack of resources create, but we were also impressed with the spirit of perseverance in the individuals we interviewed. We felt privileged to be given this opportunity to meet and more deeply understand another member of our community."

This was also true for many of the medical faculty, several of whom remarked that "there didn't seem to be anything wrong with the interviewee" or "I can't believe how resilient these folks were." Certainly for medical faculty, moving from a diagnostician to a listener was an important learning moment, highlighting the shift between trying to figure out what is "wrong" with a person, and realizing they might hear what is going "right" in the lives of their patients. Identifying the strengths of individuals could be incorporated to build a better, more comprehensive healthcare solution—a solution that is rooted in the experiences of people who overcome such obstacles on a daily basis. They also learned that these neighborhoods, where many of their patients live, are not trenchant places of doom and gloom, but instead, places that face struggles yet have the capacity for innovation and change: "What was most surprising to me was the amount of pride the individuals had for their community. I also felt very sad for one of the interviewees who described himself as disabled and "less than a man." One of the medical faculty acknowledged the teaching value of the experience: "It was an opportunity to share with the students in the group how to deal with the personal feelings that patient histories may invoke."

Connecting Interviews and Knowledge Gained to Future Practice. Many of the student participants reflected on how the experiences in the Photovoice interviews would translate into their future work. The following comments reflect how students felt that the Photovoice project affect them in unexpected ways:

"I felt that I could relate to the two mothers that we interviewed, but I also felt disconnected from them because in some aspects, we live in completely different worlds of education. I was touched by their stories, both inspired and saddened."

"I realized that this is a great program for incoming medical students like myself because I will be starting my physician's training with a deeper understanding and appreciation for the problems facing many of the poorest patients that I will encounter. It seems that often medical students first encounter homeless patients, or drug abusing patients, or uninsured patients when the patient walks into the ED (emergency department) or a clinic, and that the new medical student first sees the reactions of burned-out doctors, nurses, or medics to these people. This gives the student a burned-out model to follow, rather than a compassionate, open-minded model. Having worked in an emergency department as a technician volunteer, I have seen that many people in medicine write off the most needy patients because they are so difficult to deal with, because of their psych issues, and because they often come in with a host of difficult non-medical problems. The summer institute is giving me a tone of understanding, and of action, with which to start my career as a physician. I see myself as more of an advocate for these people now than I did when I last walked out of the ED, and I hope that I can maintain that mission as I move into my training and begin to develop my skills as a new physician."

Understanding of Social Determinants of Health. Many participants reflected on a broader understanding of the social determinants of health, particularly poverty, on the lives of many of the individuals who participated in the project. Many also noted the importance of solving problems at their root or cause, rather than the acute symptoms. They reflected an understanding that these problems are complex and require both a new way of thinking and working together to solve these problems: "This week has been a truly eye-opening experience. I cannot believe

how complex the roots are of all the problems faced by under-served populations. I have seen many people who are mostly victims of terribly unfortunate circumstances and are struggling to break the cycle. It is clear to me that these problems need to be solved by treating the source, rather than merely treating each problem as it comes up. To clarify, I mean we should use multidisciplinary teams (social work, medicine, pharmacy, city planning, etc.) to help people with improving their basic situations."

The Importance of Empathy and Non-Judgment. Many students also noted that they learned the importance of having an open mind, of reserving judgment, and acquiring empathy for the suffering of others. They connected their knowledge of the social determinants of health, and the move from individual focused blame, to a more complex understanding of the problems people face: "One thing that I've learned is the importance of empathy and non-judgment. So many cast judgments upon the poor; for a poor individual it does not matter whether the current problems they are facing are of their own making or of misfortune. The fact is that they face enormous difficulties and that judgment will not improve their situation. We must have empathy and seek to uplift the poor so that they can face and succeed in their day-to-day challenges."

The Value of Community. Finally, some students reflected on the importance of community and bridging gaps to bring about change in the area. Many were struck by the sense of community expressed by the individuals they interviewed and as noted previously, the strength and pride present in those communities: "What was most surprising to me was the amount of pride the individuals had for their community."

A sense of community of like-minded individuals, oriented to doing something about the problems we face was also reflected in their narratives: "I never have felt a sense of community where I grew up, and I feel the community here at the Institute. It is also very apparent that as a community is created here that it is spreading out into the Tulsa community in order to accomplish some really amazing goals. I have no doubt that I am in the right place at this moment, and I know it is the place for me in the future. I have loved the forward thinking that occurs here - there is a spirit of acceptance of new ideas, even as outlandish as they may sound initially. The principles that have been taught here (through experiences) are very profound, and I know they are going to affect the community in numerous ways in the future. My heart has also been opened wider than ever before this week as I have met with people from the Tulsa community. The apparent need for all of us in the community is overwhelming for me at times."

Summary of Feedback Regarding OU Clinics

Many participants mentioned OU community health clinics by name and had mostly positive comments about the clinics: "Like I said, me and my mother is OU fans. And I do, as far as like I said… I think it mentioned something about… like if I was to get sick, I go to OU physicians. Right there on 11th and right by Hillcrest." Of course, it would be difficult for some to reflect on negative situations as many of the interviewers worked in those clinics. However, many are big 'fans' of OU and feel positive about receiving care from the clinics.

Participants also revealed that the location of the clinic was very important to them, that they were able to walk to the clinic and easily access care for both their children and themselves. As one participant noted, "That means that everybody that's in this area that doesn't have transportation that survives off of public transportation, riding this bus up and down, having to load their kids up when they're feeling totally like crap and have them out here waiting at this bus stop, waiting one scheduled bus to come at one certain time, and taking them down and getting on another bus downtown, and then going to the hospital, and then making that whole,

that whole circuit back at the end of a long stay at the hospital. When most people are really just ready to get out of there and then you got to get out of there and face the matrix going home."

However, that clinic has closed and the participant noted some significant loss: "Now we got to do this all the way back. And so I just thought it was unfair…me, I'm a survivor. I'll be back on my feet….This was OU Bedlam. That's no longer there….I was disappointed. But because they always keep coming down here with these workshops and I'm in every one of them…I'm encouraged, I mean, personally as a dad, and in this, I told my son on the way down here, he says what are we doing this time, Dad? I said well OU, some future doctors and other folks are interested in trying to make an impact in our community. And they don't know where to start. And they're asking us to be field agents. And basically, I'm a field agent for our neighborhood. I'm a tell them what's wrong and what we go through. And hopefully, they can benefit from some of that."

Some also noted that while they use the clinic quite a bit, they were disappointed to learn that dental care was not provided and they are in desperate need of dental care for themselves and for their children.

Interviewer Communication Skills

When researchers originally coded the interviews, the research team was instructed to ignore interviewer statements unless statements were needed to provide context to the analysis. However, after discussion in several research meetings, it was noted that there were problems in the communication skills of the interviewers. These discussions led to the decision to go back and code the interviews for problems seen in the interviewers' communications with the participants. Such analysis could be of use to SCM, as many of the people on the interview team were either health care providers such as doctors or pharmacists, or students in health care fields.

It is important to note that the interviews themselves did not occur within a therapeutic context – in other words, these were not the same as doctor-patient transactions in the examining room. However, the interview teams had been given specific instructions to conduct the interviews using appreciative inquiry methods, and to focus on what the participants were saying. If, despite careful instructions otherwise, current and future health care providers are not communicating successfully and respectfully with people, there are some important implications that follow.

First, because one of the determinants of health literacy is provider communication, poor communication skills could adversely affect a patient's health literacy. Second, poor communication between provider and patient could have material impact on the patient's health outcomes. Finally, health professionals often find themselves needing to talk about sensitive and important issues, and therefore need to be skilled at redirection, facilitating conversation, and maintaining a non-judgmental stance; these interviews showed that the ideal is not always manifest. For example, some of the transcripts seemed to indicate that there were no introductions and no effort at basic rapport building.

Upon reviewing some of the problematic communication, a set of nodes were coded. The coding structure follows below:

Table 26: Communication Skills Codes - in Order of Frequency

Coding Node	Description	Risks Associated with Such Errors
Finishing	The interviewer appeared to	These interviewing errors do not allow for

sentences OR answering the interview question for the participant	take advantage of a slight pause to finish the participant's sentence. These finished sentences may or may not have been what the participant actually meant to say	the participant to reveal important information and have the risk of misinterpretation, particularly when the question is answered for them and the participant 'agrees' with the response.
Not allowing participant to answer	The interviewer stopped the participant in mid-sentence and continued usually with a change of subject, or some indication that he or she wanted to move on	
Personal Reference	Any instance of the interviewer injecting personal information or experiences into the interview	When conducted correctly, personal references can facilitate communication by reducing the gap between the interviewer and interviewee by finding common ground. However, when used incorrectly, such references alienate or isolate the interviewee, or more problematically enhance the gap between interviewer and interviewee.
Side conversation	Extended conversations that did not engage the participant in conversation or questions	These errors can be particularly problematic as they are inconsiderate. The interviewee may feel ignored, their opinions invalidated, or their life or opinions judged. Such communication errors have the potential to shut interviews down, or create a situation of social desirability, where participants respond how they think the interviewer wants them to respond, as opposed to revealing their true self. Interview appears insensitive, out of touch.
Not paying attention to the participant	Ignoring participant answers by responding with seemingly unrelated comments or questions.	
Changing the subject or irrelevant remark	Making statements which had nothing to do with what the participant was talking about or completely changing the subject from what the participant was talking about	
Condescending or judgmental or correcting the participant	Remarks that demeaned or shamed the participant or corrected the language of the participant	

Interrupting. The largest category for poor provider communication is interrupting. Interrupting was defined as a member of the interview team talking when the participant was still talking. This is problematic, since the act of interruption interferes with meaning. Interruption can prevent a participant from saying what he or she actually meant to say, or it may influence him or her to change statements in order to appear more agreeable to the interviewer. In normal social discourse, interruption is generally regarded as an act of rudeness. Not only can this make a

participant feel defensive and undervalued, but it shows the interviewer who is interrupting in a negative light.

Finishing Sentences. In cases where the interviewer appeared to take advantage of a slight pause to finish the participant's sentence, it was coded as "finishing sentences." These finished sentences may or may not have been what the participant actually meant to say.

Interviewee: …Then I started hanging out with a couple of these young guys that had these Honda's and they were doing things to them. And you know I really love these things or even those muscle cars. If I wanted to, I could have that car with 300-400 horsepower bolted on and it'll get 25 miles to a gallon. And this thing will run for 300,000 miles. And so that's just…

OU Team: The best of both worlds…

Not allowing participant to answer. In this category, the interviewer stopped the participant in mid-sentence and continued, usually with a change of subject, or some indication that he or she wanted to move on. When the participant is not allowed to say something, the interviewer may be missing important information that may be helpful, as in the exchange below:

OU Team: So Dr. DeWitt prescribes your Keppra and your Depakote and your Tegretol

Interviewee: Yeah, and then I go here for -

OU Team: So where do you get your medicines?

Answering the Interview Question. Closely related to interrupting is the interviewer actually answering the question he or she just asked of the participant. Hearing such exchanges begs the question: why did the interviewer ask the question if he/she already had the answer? This may have the effect of making the participant feel marginalized or unnecessary.

OU Team: So if we were to send a message to the mayor, I guess what would want him to hear?

Interviewee: Oh goodness…

OU Team: Having the street lights and speed bumps…

Interviewee: Ummmm….

Personal Reference. The second largest category of communication skills error was the one labeled "Personal reference." This coding node included any instance of the interviewer injecting personal information or experiences into the interview. Analysis of this category reveals that many of the comments in the "Personal Reference" category could be seen as attempts to contribute to the conversation by sharing common experiences. As such they would be relatively benign and might actually be seen as instances of facilitating communication. Following are three examples of facilitating personal reference:

OU Team: That's a good point; I worked at Taco Bell for four years and never wore gloves.

OU Team: I read a lot too, but I read historical stuff and biographies.

Interviewee: I really don't like looking at that picture! Isn't that terrible? I just don't.

OU Team: I never like pictures of me either.

Personal references happened more frequently when the interviewer sounded younger. These interviewers tended to say more during silences. It is a possibility they were uncomfortable and nervous about silence and pauses, and felt the need to fill up time.

Some examples of personal references interfered with the interview objectives, as seen below:

OU Team: They're changing a lot of things. Newer stores. They're starting to have green signs instead of blue signs. And the new grocery carts at the neighborhood markets are green instead of blue like the plastic parts on them. But one thing that's nice they just redone the one by my house and they added double carts.

Interviewee: You really know the store!

OU Team: I know. No we literally have one behind my house when my kids were babies and they were eating baby food I would walk them in their strollers to the Wal-Mart behind our house because I didn't want to waste gas.

Interviewee: Well sure.

OU Team: And they went through so much jarred baby food that I had to go 2 or 3 times a week to replenish baby food.

Interviewee: I can't imagine twins. Awww!

OU Team: So we, yea, we're very familiar with this neighborhood market behind our house but they now have the double like they have at the Super Wal-Marts with the 2 plastic seats at the front. They now have it at this neighborhood market which is fantastic because I couldn't put both of my kids in the cart together safely.

Interviewee: Right. One's kind of loose and sideways!

OU Team: Yea and then they both try and stand up and yea they really, these are much better. So I was very excited about that. Seems like the new neighborhood markets, they're not carrying as much, as many different brands they're carrying their own stuff. Wal-Mart in general, has stopped carrying different things we've noticed. I go to, I really like Reasons better but Wal-Mart is so conveniently close to our house. I know mine too. But yea, we try to so the most of our grocery shopping, and they just changed the Wal-Mart and we just went in there to return a red box movie.

Interviewee: …. the signs, and the plastic, and the carts.

OU Team: Well, the signs are on the outside! Like the sign on the store! Oh they've changed that? Yea the sign on the store is green. And it used to be blue. (Inaudible) I thought you meant the signs in the store! No, well but those haven't changed I guess. (Inaudible) But I haven't actually done any grocery shopping since I started [department] school. My husband's done all of it. So he's been a saint that way. When I shop I don't pay attention to the signs, I'm like, "All right what do I need?" And I'm usually trying to keep my children from screaming. You keep them both in the cart? We usually, like before I started [department] school we would all 4 go shopping together and so I would put one kid in my cart and [husband] put the other kid in his cart and then if I would go off somewhere to get one thing and my husband would go off another way we got both kids screaming, "Mommy! Daddy!" It's like, "We're right here! We just went down another aisle to get something else!" They're funny. Then if they see each other across the store they're like, "Sissy! Sissy!" like it's been so long. I know. I'm afraid it's very traumatic for them. They're weird. It's funny.

In the example above, the focus is on what is said by the OU Team members, not on the participant's answers. The communication does not facilitate further commentary from the respondent. In fact, the OU team spoke a total of 505 words, while the participant responded with just 27, thus eliciting very little useful information from the participant.

Side Conversations. These were instances in which the interviewers engaged in extended conversations among themselves without including the participant. The following conversation was between OU team members and went on for over two minutes while the participant listened:

OU Team:

There are some like… I guess I'm not from here lately so I don't know but, and they have a lot of people call them minute clinics or doc in a box, but places like that around where you don't always need to be insured or are there things like that around?

There used to be, I don't know what they do with the ready clinics those used to be at Wal-Mart and you just don't see them anymore.

And called 2-1-1 is what my boyfriend was saying and… but you could just walk in and…

You just don't see them anymore.

They're like exploding in Texas. They're like next to every donut shop.

And they will take you in without having insurance?

Absolutely, it' just cash. They have a fee.

If you ask them, if you ask them, but what if you don't have the cash will they turn you away?

Well, probably.

Yes, because they are corporate structures.

But as opposed to an emergency room might charge you like 300 dollars. You know if its something that can be fixed at a clinic? I think usually they're something like 70 or 80 dollars. It's expensive.

70 dollars can be prohibitive.

But they had, they were up and coming about 3 and a half years ago. And then they just disappeared.

There's a lot of liability issues that a large corporation they don't want to deal with because you can't really examine the patients, if they need an x-ray, if they need an ultrasound. If whatever they need you can't provide it at the office.

In Texas it's different.

At the same time they're the perfect place for people who want to use them as well.

And it's also the place for somebody who just you know has a runny nose and a sore throat. Run in get your swab, call it a day. By the same time we don't have those here.

Have you been happy with your providers that you've had for your daughters using the state insurance?

These instances may signal to the participant that he or she is not the focus in the interview, that the interviewers themselves are more important.

Not Listening to Participant. There were also many times when it appeared that the interviewers were not listening to the participants at all, preventing meaningful discussion of topics. Following is an example:

Interviewee: Mexico City and I was dancing in the Belles Artes. If you know, it is a big company of ballet. You know that right?

OU Team: Do you want us to go in any particular order on these pictures?

The above exchange has the potential to tell us something interesting and unusual about the participant, information that may throw important light on her background. The interviewer not only does not follow up, but appears to find the participant's statement of so little interest that it is not worth any acknowledgement whatsoever.

Changing the Subject. In other examples, interviewers change the subject while the participant talks about a picture. In the following example, a participant is explaining why she chose this particular picture for her "unhealthy place."

Interviewee: And I had thought of different stuff, not just the cigarettes because there's a bar that's by our house and I took a picture of the bar. And then our, at the end of our block there's a house that had gotten knocked down and the people haven't cut their yard so it's like really high and I got a picture of that too. And I thought, let's see, which ones should I use. And I said, I'll just go with the cigarettes. There was a picture of an overgrown field and a bar that I was deciding on.

OU Team: Oh, so there was a picture of –

Interviewee: A field.

OU Team: So what color is your hair supposed to be?

Condescending or Judgmental Remarks. There were instances of the OU team members making statements that were condescending or judgmental, placing the participant on the defensive. The following excerpt is from an interview in which the participant had reluctantly disclosed that she had recently started smoking. Several minutes later the OU team brought it back into the conversation:

Interviewee: We don't go outside much, because of the heat. Both our boys, they've been sick a lot. And our little one, they're thinking he has asthma. Allergies.

OU Team: Probably because you guys all smoke (laughing.)

Interviewee: He had it before I even started smoking.

OU Team: Oh.

Other Observations. The researchers observed that there were instances in the interviews in which the participants were providing what they assumed were "socially desirable" responses. For example, when interviewers completed sentences, participants rarely corrected their responses, even when it was clear that the completed sentence may not have had any relationship to what the participant may have actually intended to say.

Researchers noticed a tendency, especially among younger interviewers, to engage in extremely informal conversation, as if they were chatting with their peers rather than participating in a research interview. This had the potential of alienating participants, especially when there was an economic or cultural differential in the group. Language use has the potential to increase cultural or linguistic gaps between if interviewers usual casual rather than professional tone of voice or language. One goal of professional communication is to reduce, not increase, the disparities between speaker and listener. Researchers noted that, especially when there appeared to be significant socioeconomic or educational differences between interviewers and participant, the participants attempted to reduce this gap by trying to make themselves sound better --- NOT the other way around, which is the way it should be – because then you don't get the information you need.

In all, a close examination of the transcripts showed many instances of communication errors. Listening to the recordings of the interviews reveals that problems may be even worse than those found in the transcripts. The use of aggressive tones of voice, constant interruption, or the anticipation of participant answers, sometimes made interviews sound like interrogations. Often participants sounded hesitant or apprehensive. Many of the participants do not have relationships with health care providers outside of a health care setting, and this kind of experience was new and possibly a little frightening to them.

There were many instances of interviewers doing their best to set the participants' minds at ease, to relieve them of anxiety, to truly connect with the participants and to understand them as best as they could. Unfortunately, there were also multiple examples of interviewers who seemed determined to find out what was "wrong" with the "patient" in front of them, take care of the problem, and move on as quickly as possible. This attitude is also seen in some of the debriefing material, where members of the interview team complained that the interviews were too long. While appreciative inquiry methods of communication are not necessarily suitable for clinical settings, we asked and trained interviewers to focus on appreciate inquiry.

Strengths and Limitations of Study

Several elements of the Photovoice project contributed to its success. Specific project elements that were important to establishing the rhythm, influence, and purpose of the study include the following:

Strengths

Setting the stage. Prior to the project, members of the research team attended multiple meetings, lunches, and presentations with the College of Medicine and with CSI. In addition, the team already had a trusting work relationship between the College of Medicine and CSI from previous successful projects. In the initial meetings, TACSI coordinators were asked to provide feedback to the focus of the photos, process for recruiting participants, and collecting data. Both the SOCM and TACSI emphasized a clear need was to engage in agenda mapping, so that both organizations could understand "why should we do this?" and "what is in this for us"?

Giving back: incentives, demonstrating appreciation, providing forum for feedback. In order to demonstrate appreciation and provide incentives to participants, several project elements were included that provided opportunities to thank and reward participants. As noted previously, participants took photos during the summer and were then interviewed by a team of Summer Institute participants during one evening in the week of the institute. During that interview, researchers provided food. At the close of the interview, participants were given the camera as a gift of appreciation, and also an invitation to attend a luncheon at the university at the close of the institute.

Researchers were able to respond to unanticipated requests. For example, after the institute was over, many of the TACSI coordinators asked for copies of the photos to hang in their schools. Researchers were able to print and mount these photos for each school. We also attempted to involve participants in any media requests about the project. In one instance, one of the participants was interviewed on local television about the project. Finally, the website that was created was also meant for participants and partner organizations. The website organized the photos in several different ways, highlighted a project video that explained the Photovoice project, and was (and still is) available to the public.

Taking it to the street: going to participant neighborhoods and schools. As much as possible, the research team managed to meet with participants at locations most convenient to them. On the night of the interviews, the teams met with participants at locations within the participant neighborhoods. The participants generously provided their time and opened their lives to the interview team, and researchers took great care to generate an environment of mutual respect and collaboration. Many of the participants felt honored to participate and took their role in the project very seriously, as in the following comment:

"The night they came and did the recordings, the people who came to (my school) were incredibly polite and um, (yes, professional) well, we had no air conditioning and they were still very nice (laughing) and our air conditioning was out and they were so nice and with the dinner provided. I mean some of my participants dressed up like they were going out some place nice, you know. Which was a sweet thing I thought. And it just showed me that they felt like they got picked and that they were special. Some of them wore high heels and hose and I was like, 'Really? I have never even seen her dressed in a dress. I've never seen her in anything but like men's clothes, like she was going to work some place'…I think because they were picked, or selected maybe? There was the flip side of that, which was how the people from the university treated them. So I think that was a nice combo."

Taking off the White Coat. The expression "taking off the coat" came from one of the participants who mentioned that taking off the white coat was an important leveling maneuver in the research project. Symbolically, the removal of the coat represented the removal of formality and the subsequent replacement of that formality with informal relationships and the cultivation of genuine dialogue, where people listen to one another with 'open minds and hearts.' As much as possible, leveling out the playing field and treating participants as experts about their own lives served this project well. Many of the participants have not had the opportunity to see a doctor outside of a clinic setting or to interact with them in informal settings. The Photovoice project allowed this to happen. Voices were heard, genuine conversations were held, and people felt appreciated. This seemingly common, but often forgotten value of respect goes a long way in this kind of research. It takes a small amount of effort to help people feel valued, yet it is often forgotten both how simple it is and what a difference it can make.

Voice and Visuals. The photographs as visual representations created a starting point for dialogue and facilitated thinking and talking about their neighborhoods and health - even in advance of interviews. This reflection added to the depth of their conversations about the problems they faced, their resourcefulness, and their strategies and suggestions for change.

"The Photovoice interviews were a good way to break the ice and help the conversation flow by providing pictures to talk about. It helped create an intimate conversation where the interviewee was very honest and open with us."

Limitations.

Is the Photovoice Project truly CBPR? While the research team took great care and concern when involving the partners' (School of Community Medicine and TACSI) and the community members' desires while designing and implementing the Tulsa Photovoice project, due to the size and number of stakeholders, it was not possible to sustain the commitment to all CBPR practices. Whenever possible, the partners were consulted, however, employing 200 people in a research project is challenging and some ideas were simply not feasible. Some have noted that PAR exists on a continuum with low to high level PAR possibilities (Balcazar et al, 2004.) While all community and University partners were certainly included as equal partners and great care was taken to include participants, the participant role was more consultant than decision maker in this project. The next phase of this research will include more participant involvement in the dissemination phase. Also, in the future, the utilization of community IRB's and research review boards (The Bronx Health Link and Community-Campus Partnerships, 2012) may be a useful tool in Photovoice projects.

Communication Skills. As mentioned previously, there were some communication skill problems with some interview team members. Therefore, not all interviews were conducted under ideal situations or in ways that elicited the best or most accurate information from participants. Future projects should consider a more intensive interviewer training.

Biasing Participant Results. The research team provided an example set of nine photographs for participants to see. The intent was that these examples would give the participants a good idea of the kinds of general topics that researchers were interested in, while reducing the burden of explanation on the project facilitators. We discovered that we may have biased participants to duplicate the photos that we provided as samples. For example, the sample photo we provided for "unhealthy place" was a fast-food drive-through menu. Several participants took the same kind of photograph of a fast-food drive-through menu, although in their narratives they discussed other kinds of unhealthy places, sometimes at greater length than about fast-food restaurants in their neighborhood. We were concerned that we may have biased participants into using the photos as templates rather than as examples.

Conclusions

Health: Sources of health care, health care access, health status, and literacy

Results reveal that while most of the participants rated their health as good, about a fourth indicate significant health concerns and problems, including conditions such as diabetes, congestive heart failure, and accidents.

The four most common sources of health care listed by participants were easily categorized into four groups: self-care (23%), doctor or clinic (28%), urgent care or hospital (15%) and community health clinic (33%). Where individuals sought care was related to their insurance status, of those without health insurance, 50% receive care at community health clinics and 30% engage in self-care. Those who reported that they received health care at community health clinics reported the lowest self-rated health status and the lowest income and education levels.

Participants noted several barriers to health care access: red tape (barriers of bureaucracy), cost, quality, long waits, and language. Those who receive health care at community health clinics report the most barriers to care.

As previously noted, although the study did not include health literacy issues as a focus of the research, health literacy did emerge as an important theme for a significant number of participants. Low levels of health literacy contribute to confusion many participants have about their own health or the health others and about the mechanisms for optimal health.

Communication Skills Concerns. The problems in interviewer communication skills were an unexpected finding of this project. Despite training provided to the interview teams, many of the interviewers did not use skills well suited to appreciative inquiry. There were many instances of interviewers doing their best to set the participants' minds at ease, to relieve them of anxiety, to truly connect with the participants and to understand them as best as they could. Unfortunately, there were also multiple examples of interviewers who seemed determined to find out what was "wrong" with the "patient" in front of them, take care of the problem, and move on as quickly as possible.

$24,481=

The income differential between those who receive care at community health clinics versus private clinic

Car Dependent. Community development strategy for areas around the participants' community schools should include efforts to reduce the number of trips required to be made by car and the creation of place. Reducing the number of automobile trips or vehicle miles traveled will require major changes to public policy, infrastructure spending and land use regulation. Emphasis should be placed on providing pedestrian and bicycling facilities, expanding public transportation

options, slowing vehicle traffic, and introducing mixed use real estate development with higher densities. Creating place is a much larger challenge that involves more profound social and cultural shifts. Promoting social gatherings and organizing clubs and organizations, such as a Neighborhood Watch or Parent Teacher Associations, are first steps that the schools might facilitate.

There is no connection between access to food and distance or location. Participants indicated preferences for certain grocery stores and demonstrated a willingness to drive to those locations, even if they were located at distances quite far removed from the residence. A number of participants noted an 'anti-Wal-Mart' sentiment while Quick Trip was very positively regarded by many of the participants.

Community health clinics are an important safety net for many participants. However, those served by the community health clinics are in poorer health and have less access to services and resources. Some participants noted that the closing of clinics had a negative impact on them personally, or on others they knew.

Photos and interviews revealed several neighborhood specific advocacy issues. Many participants noted specific community issues such as areas with high crime or gang activity, environmental hazards, pockets of abandoned houses that attracted unwanted attention. Some of the participants noted many of the same issues.

Community Building. This type of participatory project had lasting impacts on those who participate. As a community building and relationship building exercise this project clearly helped facilitate relationships and understanding both between institutions, but between individual community members and institutions as well. The good will created by this project was one of the most important outcomes of this research.

The important of community schools. Many participants noted high levels of involvement in the community school and had positive regard from the community schools and what those schools meant to the surrounding neighborhood.

Resilient places and people. Participants spoke frequently about pride in their neighborhood, school and community. Many participants described social support networks, instances of neighbors helping one another, and overcoming significant adversity.

Recommendations (TASCI specific, SCM specific)

Create a strong partnership for health and literacy education. Health literacy emerged as a significant concern for many of the participants. Both TASCI and OU-Tulsa have resources that could be leveraged in a partnership to enhance health literacy in participant communities.

Improve provider communication skills. Working with community members requires specific skills that move beyond the traditional provider-patient encounter. Focusing on appreciative inquiry, the important of two-way dialog and creating partnerships for providers is an important beginning for this work. Communication training for providers must be increased and improved.

Empower participants and communities to advocate for specific neighborhood issues. The photos and interviews unveiled specific neighborhood improvement or avenues for neighborhood advocacy. TASCI could work with communities around development, advocacy or solutions to some of these community problems.

Engage in similar participatory projects in the future. This methodology created good-will and helped build and establish relationships between community members and TACSI and OU-SCM.

Explore further relationship building with Quick Trip. Many of the participants noted using Quick Trips for food, for socialization, and that stores were easily accessible and conveniently located. Development of a partnership with Quick-Trip could provide programming and or services that would be very accessible to community residents.

Create a transportation hub, system to connect the dots between participants and providers. Tulsa is regionalized and people travel all over the city for health, food and other services. Alternatives for transportation for those who do have struggles related to transportation have the potential of increasing regular access to care.

Continue to strengthen community schools. Many of the participants noted strong relationships with their community schools and the importance of the school in neighborhood development and the well-being of neighborhood children.

Strengthen current community health clinics. Enhance existing partnerships between institutions that share physical space with clinics and enhance cooperation between entities that serve the communities.

Continue to partner with communities in order to better understand the community health population. Research findings reveal that the clinics are an important safety net for participants. However, community health patients are more likely to experience social disadvantage, report poorer health status, and have low levels of health literacy. They are also most likely to report barriers to care including red tape, long waits, language barriers, low quality of care, and cost. Models of health care delivery must account for the non-traditional nature of the patients that access these clinics.

References

Bogan, R. C., & Biklen, S. K. (2003). *Qualitative research for education: An introduction to theories and methods* (4th ed.). New York: Pearson Education Group.

Brownson, R. C., Riley, P., & Bruce, T. (1998). Demonstration projects in community-based prevention. *Journal of Public Health Management and Practice, 4*(2), 66-77.

Crucetti, J. (2000). Building constituencies to promote health. *Journal of Public Health Management and Practice, 6*(2), 62-6.

Feen-Calligan, H., Washington, O., & Moxley, D. (2009). Homelessness among older African-American women: Interpreting a serious social issue through the arts in community-based participatory action research. *New Solutions: a Journal of Environmental and Occupational Health Policy, 19*(4), 423-448.

Finn, J. (1994). The promise of participatory research. *Journal of Progressive Human Services, 5*(2), 25-42.

Grinstead, O., Zack, B., & Faigeles, B. (1999). Collaborative research to prevent HIV among male prison inmates and their female partners. *Health Education and Behavior, 26*(2), 225-238.

Hatch, J., Moss, N., Saran, A., Presley-Cantrell, L., & Mallory, C. (1993). Community research: Partnership in Black communities. *American Journal of Preventative Medicine, 9*(6 supp), 27-31.

Hawkins, R.L., & Maurer, K. (January 01, 2011.) You fix my community, you have fixed my life: The disruption and rebuilding of ontologicalsecurity in New Orleans. *Disasters.*

Health Resources and Services Administration. (n.d.). About health literacy.

Israel, B., Schulz, A., Parker, E., & Becker, A. (1998). Review of community-based research: Assessing partnership approaches to improve public health. *Annual Review of Public Health, 19*, 173-202.

Jacobs, J. (1961). *The death and life of great American cities*. New York: Random House.

Levine, D., Becker, L., Bone, M., Hill, M., Tuggle, M., & Zeger, S. (1994). Community-academic health center partnerships for underserved minority populations: One solution to a national crisis. *Journal of the American Medical Association, 272*(4), 309-311.

McAvoy, P., Driscoll, M., & Gramling, B. (2004). Integrating the environment, the economy, and community health: A community health center's initiative to link health benefits to smart growth. *American Journal of Public Health, 94*(4), 525-527.

Putnam, R. (2000). *Bowling alone*. New York: Touchstone.

Putnam, R. (2002). *Democracies in flux*. New York: Oxford University Press.

Sanoff, H. (1999). *Community participation methods in design and planning*. New Jersey: John Wiley and Sons.

Suarez-Balcazar, Y., Kinney, L., Masi, C., Cassey, M., & Muhammad, B. (January 01, 2004). A Participatory Internet Initiave in an African American Neighborhood. *Journal of Prevention & Intervention in the Community, 29*, 103-116.

Wang, C. (1999). Photovoice: A participatory action research strategy applied to women's health. *Journal of Women's Health, 8*(2), 185-192.

Wang, C. (2000). Who knows the streets as well as the homeless? Promoting personal and community action through photovoice. *Health Promotion Practice, 1*(1), 81-89.

Wang, C., & Pies, C. (2004). Family, maternal & child health through photovoice. *Maternal and Child Health Journal, 8*(2), 95-102.

Wang, C., & Redwood-Jones, Y. (2001). Photovoice ethics: Perspectives from Flint photovoice. *Health Education & Behavior, 28*(5), 560-572.

Wang, C., Morrel-Samuels, S., Hutchison, B., Bell, L., & Pestronk, R. (2004). Flint photovoice: Community building among youths, adults, and policymakers. *American Journal of Public Health, 94*(6), 911-913.

Wang, C., Yi, W., Tao, Z., & Carovano, K. (1998). Photovoice as a participatory health promotion strategy. *Health Promotion International, 13*(1), 75-86.

Appendix A List of PV Participants, Demographic Information

Table 27: List of PV Participants, Demographic Information

Participant	Age	Gender	Employment	Race	Family Status	Number in Household	Education	Insurance Status	Secure in Health Insurance
Cooper									
1 AW	21	M	Full	Black	single	3	some college	yes	yes
2 MJ	42	F	Part	Black	single	3	some college	no	NA
13 CS	61	M	No	White	married	1	HS Diploma	yes	yes
14 AJ	33	F	Part	White	married	4	HS Diploma	yes	yes
15 PK	61	M	Full	White	married	2	some college	yes	yes
16 NT	65	F	Part	White	married	2	post grad	yes	yes
Participant	**Age**	**Gender**	**Employment**	**Race**	**Family Status**	**Number in Household**	**Education**	**Insurance Status**	**Secure in Health Insurance**
Briarglen									
5 AP	33	F	Part	Hispanic	divorced	2	some college	yes	yes
6 AV	59	F	No	White	married	2	some college	yes	yes
7 AS	66	M	No	Black	married	2	post grad	yes	yes
8 MT	35	F	Full	Black	married	5	some college	yes	yes
Participant	**Age**	**Gender**	**Employment**	**Race**	**Family Status**	**Number in Household**	**Education**	**Insurance Status**	**Secure in Health Insurance**
Bryant									
9 MD	27	F	Full	Asian	married	4			
10 MH	27	F	No	IND/AK	married	4	some HS	yes	yes

11 RB	42	F	Full	Hispanic	married	4	HS Diploma	yes	yes
12 TB	27	F	No	Black	single	3	HS Diploma	yes	yes

Participant	Age	Gender	Employment	Race	Family Status	Number in Household	Education	Insurance Status	Secure in Health Insurance
Eugene Field									
17 JG	34	M	No	Black	married	5	some college	no	NA
18 JH	72	M	No	White	married	4	less than 8th	yes	yes
19 JB	59	F	Full	White	married	2	some college	yes	no
20 CH	33	F	No	Black	single	3	some HS	yes	yes
47 JM	40	M	Full	Black	married	5	some college	no	NA

Participant	Age	Gender	Employment	Race	Family Status	Number in Household	Education	Insurance Status	Secure in Health Insurance
Hawthorne									
22 ATH	30	F	Full	Black	divorced	2	post grad	yes	yes
23 YH	32	F	Full	Black	widowed	4	4 yr college	yes	no
24 LA	66	M	No	Black	divorced	1	post grad	yes	yes

Participant	Age	Gender	Employment	Race	Family Status	Number in Household	Education	Insurance Status	Secure in Health Insurance
Kendall Whittier									
25 TW	39	F	Full	White	divorced	2	HS Diploma	yes	yes
27 BT	45	F	No	White	divorced	2	4 yr college	no	NA

Participant	Age	Gender	Employment	Race	Family Status	Number in Household	Education	Insurance Status	Secure in Health Insurance
Mark Twain									
3 RH	19	M	No	White	married	3	some college	yes	yes
29 RH	47	M	Full	White	married	3	4 yr college	no	yes
30 SL	30	F	No	White	single	5	some college	no	NA
31 LK	54	F	No	White	married	8	some college	no	
32 DB	28	F	Part	White	single	6	some college	no	NA

Participant	Age	Gender	Employment	Race	Family Status	Number in Household	Education	Insurance Status	Secure in Health Insurance
Marshall									
33 KG	56	F	Full	White	divorced	2	4 yr college	yes	yes
34 ADL	34	F	Part	Black	married	6	4 yr college	yes	yes
35 KN	71	F	No	White	married	2	post grad	yes	yes
36 CK	39	F	Part	IND/AK	married	3	post grad	yes	Yes

Participant	Age	Gender	Employment	Race	Family Status	Number in Household	Education	Insurance Status	Secure in Health Insurance
McClure									
37 MH	39	F	Part	Hispanic	single	3	some HS	no	NA
38 LW	45	F	No	White	single	2	HS Diploma	yes	yes
39 DF	45	M	No	Black	single	3	some college	yes	yes
40 AC	52	F	No	IND/AK	single	7	some HS	yes	yes

Participant	Age	Gender	Employment	Race	Family Status	Number in Household	Education	Insurance Status	Secure in Health Insurance
McKinley									
41 LT	44	F	Part	White	married	4	HS Diploma	yes	yes
42 TC	28	F	No	White	married	5	some college	no	NA
43 JW	32	F	Part	White	divorced	3	less than 8th	no	NA
44 CA	25	F	Part	Hispanic	married	4	some HS	yes	no

Participant	Age	Gender	Employment	Race	Family Status	Number in Household	Education	Insurance Status	Secure in Health Insurance
Remington									
46 MC	54	M	Full	Black	married	5	post grad	no	NA
45 BL	NA	F	NA	NA	NA	NA	NA	NA	NA

Participant	Age	Gender	Employment	Race	Family Status	Number in Household	Education	Insurance Status	Secure in Health Insurance
Robertson									
51 JM	31	F	No	White	married	4	some HS	yes	
52 DA	53	M	No	White	married	3	some college	yes	yes

Participant	Age	Gender	Employment	Race	Family Status	Number in Household	Education	Insurance Status	Secure in Health Insurance
Rosa Parks									
53 MR	28	F	Full	White	divorced	3	some college	yes	yes
54 SN	33	F	Full	White	married	5	some college	yes	yes
55 RG	31	F	No	Hispanic	married	4	HS Diploma	no	NA

56 LK	40	F	Part	White	married	4	4 yr college	yes	yes
Roy Clark									
57 SJ	34	F	Part	Black	married	6	HS Diploma	no	NA
58 RB	24	F	No	White	married	5	some college	no	NA
59 ML	36	M	No	IND/AK	single	2	some college	yes	yes
60 AF	39	F	Full	White	married	4	some college	no	NA

Appendix B: Coding Tree

Table 28: Coding Tree

NODE	DESCRIPTION OF NODE
Beliefs	**Participant mentions any type of belief they hold. May not be religious in nature, could be values or future aspirations.**
Aspirations	Participant discusses future goals, dreams, etc. Can be for self or others, such as: "I want my children to attend college" or "I want to open a business."
Religion - House of Worship	Participant discusses religious beliefs or time spent at house of worship. Could also talk about volunteering in the community because of religious beliefs.
Value Statements	Participant discusses personal values outside of a religious context. For example, "I don't like all the illegal immigrants" or "It takes a village to raise a child."
Economy	**Participant makes reference to the economy at large or their own personal situation.**
Budget-Cost of Living	Participant talks about personal budget or how the economy affects them personally. May be positive or negative.
Goods and Services	Participant discusses purchasing goods and services other than food. Can be items participant recently purchased, plans to purchase, or needs to purchase but cannot afford.
Social Services	This category will include any Social Security checks, food stamps, public housing, etc.

Work	Participant talks about their work or how they earn money. Could also be family member's work (such as a spouse.) Includes those looking for work.
Environment	**Participant discusses environment. Could be their home or neighborhood, could also be crime or safety. May be coded to multiple categories.**
Crime - Safety	Participant talks about crime or safety issues.
Domicile	Participant talks about their home or apartment complex.
Neighborhood	Participant discusses their neighborhood, as they define it. May also discuss other neighborhoods of which they are familiar.
Vices	Participant describes environment as having alcohol, cigarettes, sex-oriented business, etc.
Food	**Anytime participant talks about food, code to the corresponding category(ies).**
Cooking	Participant mentions cooking, or lack thereof. Could be self or others who are or are not cooking.
Dining	When participant discusses eating any meal. Could be location, frequency, or content.
Food Origins - Groceries	Participant discusses where they get their food. Could be grocery store, farmer's market, or personal garden, etc.
Health	**When participant discusses any health-related issues, code to corresponding category/ies. May be more than one category, and may be regarding participant's health, or someone else.**
Health Care Providers - Access	Participant discusses providers, including specific doctors, hospitals, clinics, etc. Also anytime they discuss access to health care or lack of access to health care.
Health Habits or Literacy	Participant discusses healthy habits or unhealthy habits of self or others, or any health beliefs they hold Beliefs may be correct or incorrect. For example, "I quit smoking because it is bad for me" or "I eat a lot of fried chicken because chicken is good for me."
Health Problems	Participant discusses any health problems of self, family, friends, co-workers, etc. May be high blood pressure, cancer, diabetes, asthma, weight, etc.
Insurance	If participant mentions health insurance, code here.
Poignant Quotes	**Direct quotes from participants for website, etc., which seem to capture a theme.**
Photovoice Reflections	Participant talks about the experience of participating on the PhotoVoice project.
Relationships	**Participant discusses any relationship with another person, or the effects of the relationship. May fall into multiple categories.**
Exchange -Support	How participant discusses lending or receiving support from relationships.
Family	Participant discusses family. May be husband, children, parents, siblings, etc.

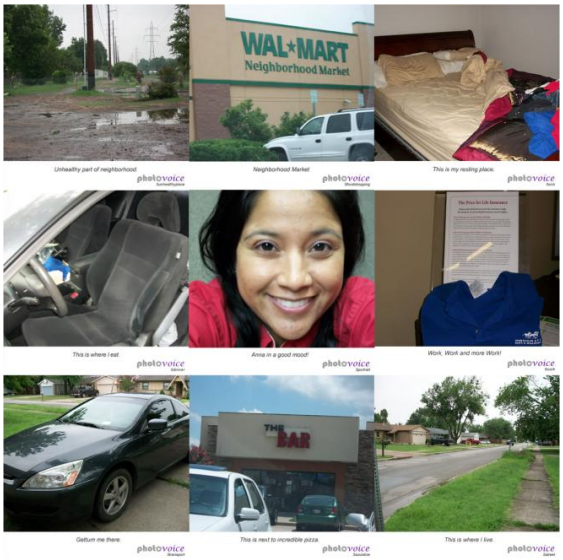
Friends	Participants discuss friends. This category may include co-workers.
Pets	Participant discusses pet.
Socialize	Participant discusses socializing activities.
Education **School**	**When participant talks about their children's school, or any other school. Also when they discuss school or education in any manner.**
Transport	**Participant discusses transportation means or issues. May be multiple categories.**
Active	Participant identifies walking or cycling as their means of transportation.
Public Transport	Participant discusses public transportation, such as buses, taxi, the lift system, etc.
Time or Distance	Participant discusses the amount of time they spend in transport, or the distance they travel. Could discuss commute, etc.
Vehicle	Participant identifies car, truck, van, etc., as means of transportation. May be self or others vehicle.

Appendix C: Photo Index Organized by Community School

Briarglen Elementary

Table 29: Photo Index Organized by Community School

#5



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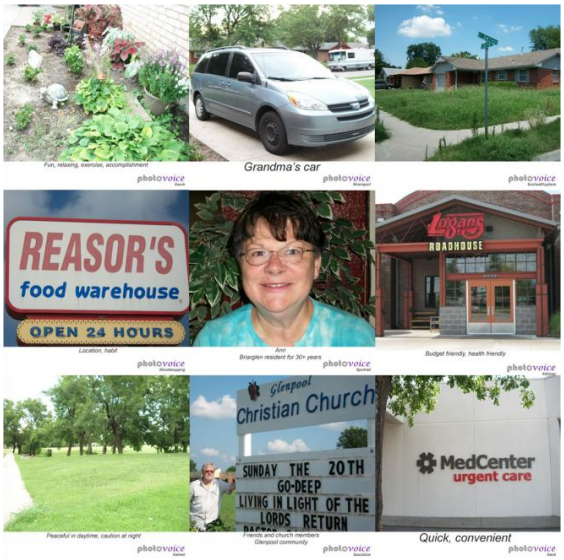

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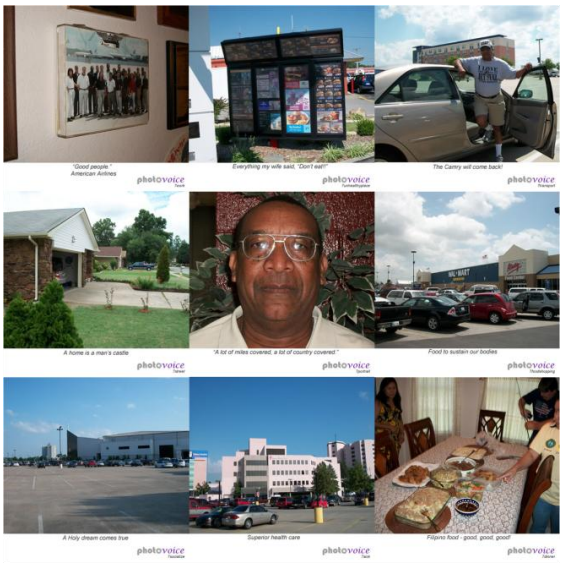

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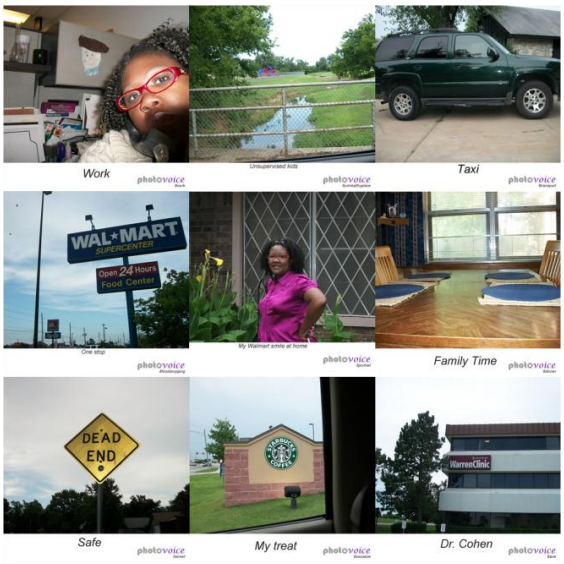
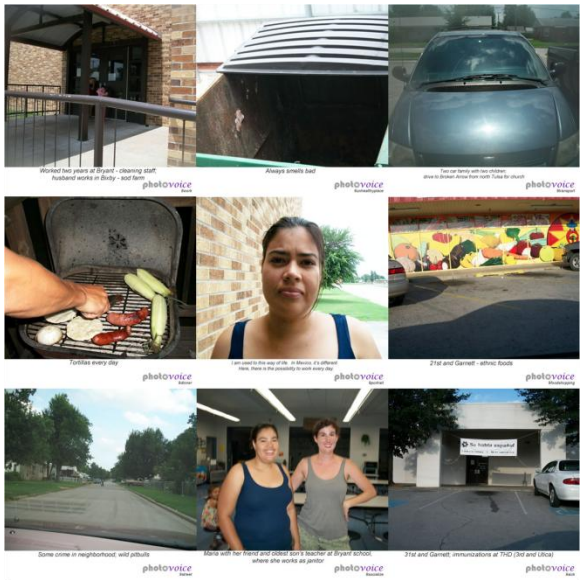


Bryant Elementary

#9



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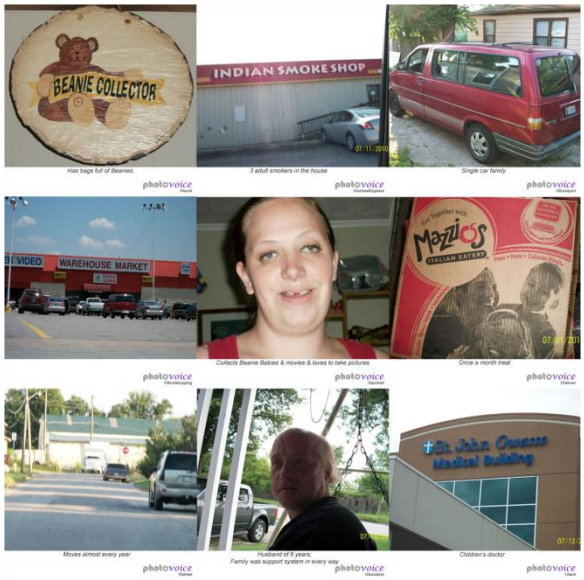

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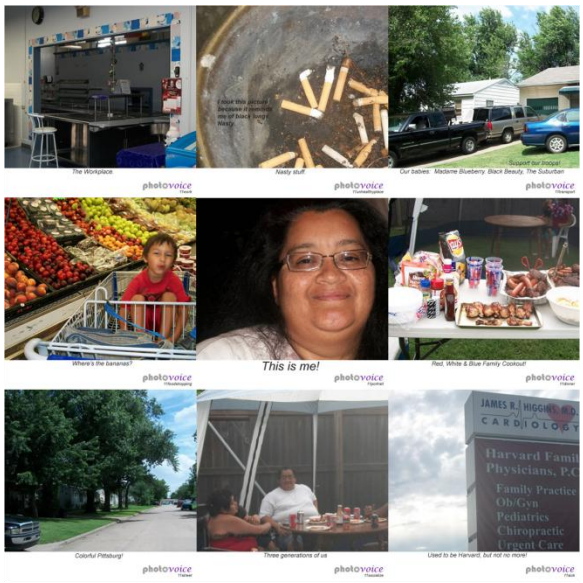

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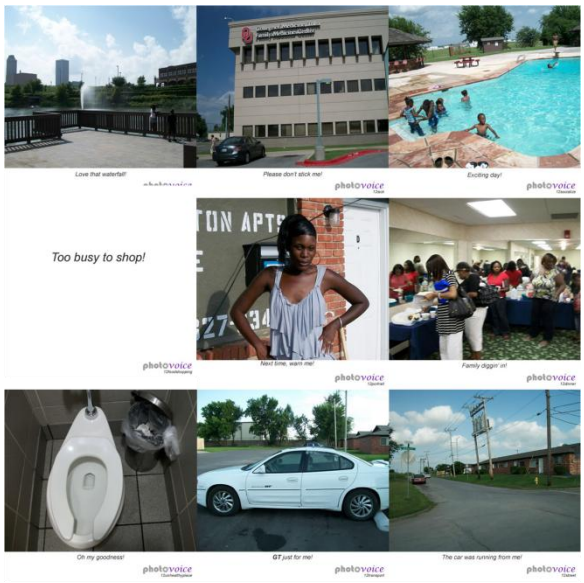
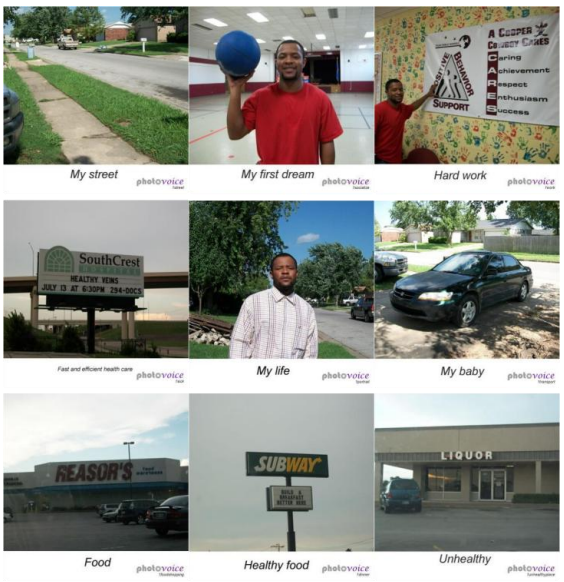


Cooper Elementary

#1



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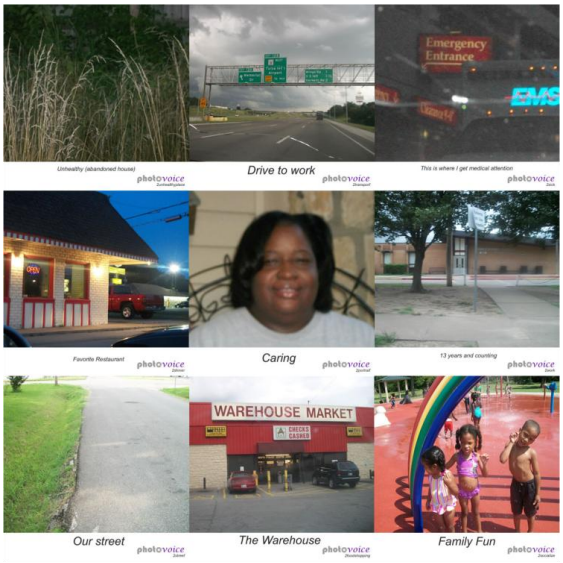
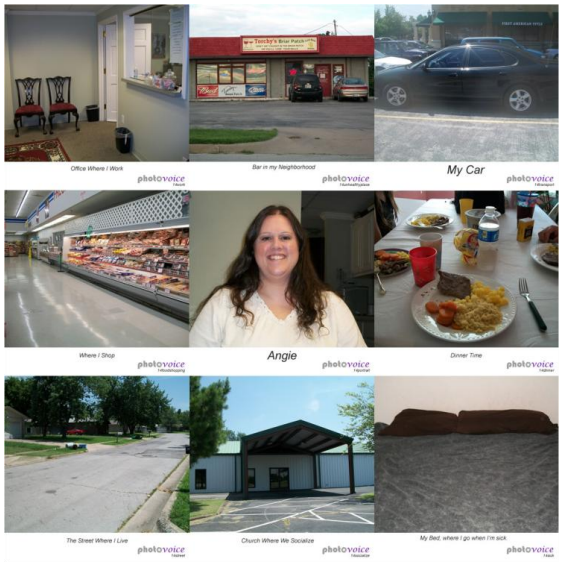


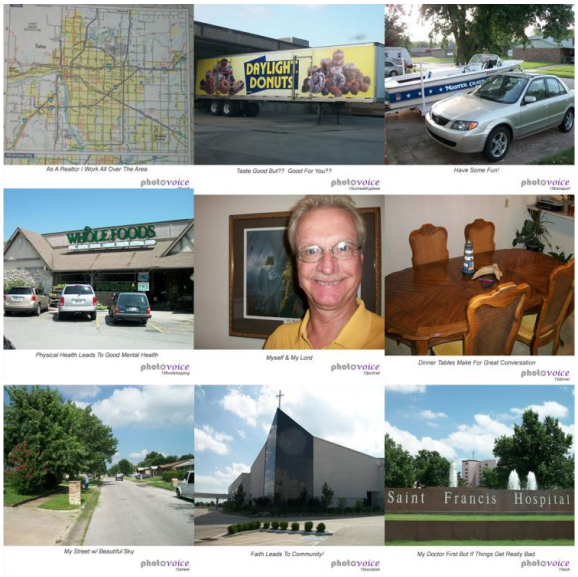
#13


Home
Yum!
Good Organization
Which choice?
Paw-paw
Good Health Care
Censored

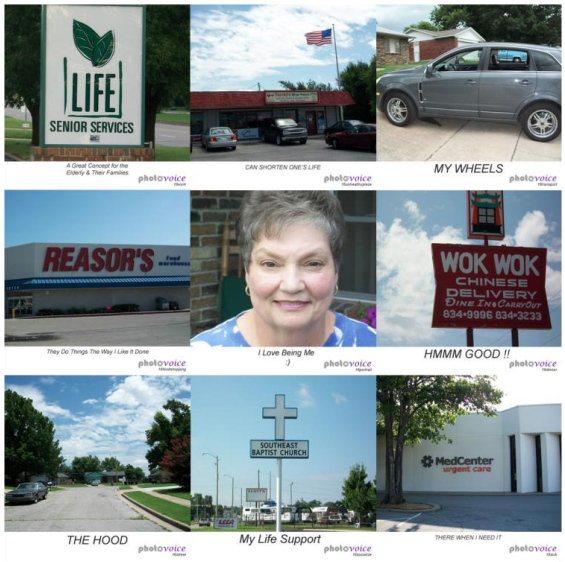
#14


My Car
Angie

#15

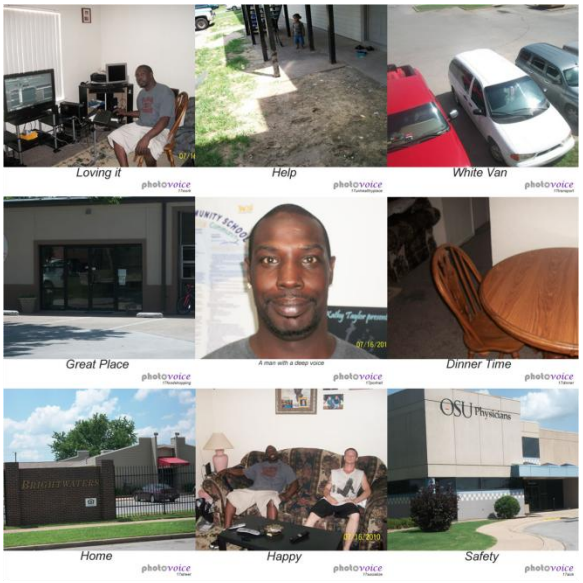

DAYLIGHT DONUTS
WHOLE FOODS
Saint Francis Hospital

#16


LIFE
SENIOR SERVICES
MY WHEELS
REASOR'S
WOK WOK
CHINESE
DELIVERY
834-9996 834-3233
HMMM GOOD !!
SOUTHEAST BAPTIST CHURCH
MedCenter
urgent care
THE HOOD
My Life Support

EUGENE FIELD

#17



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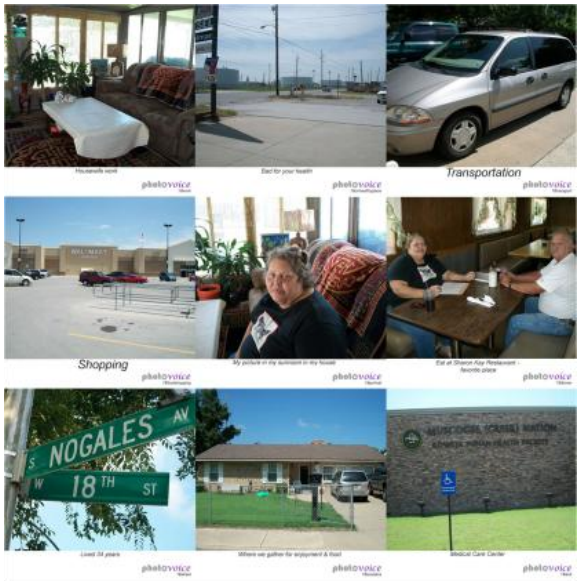

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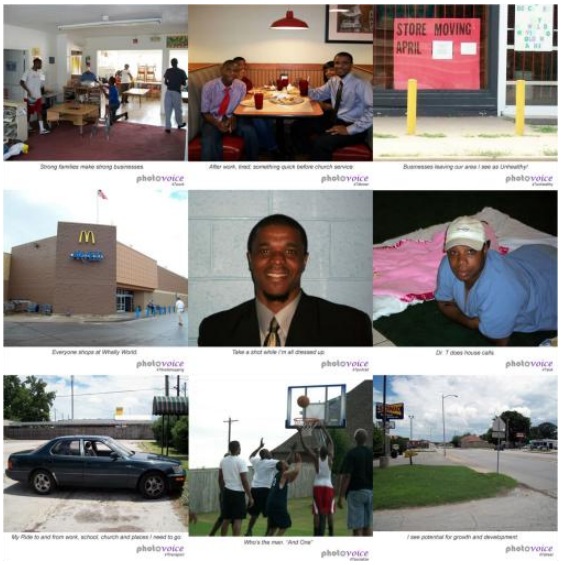

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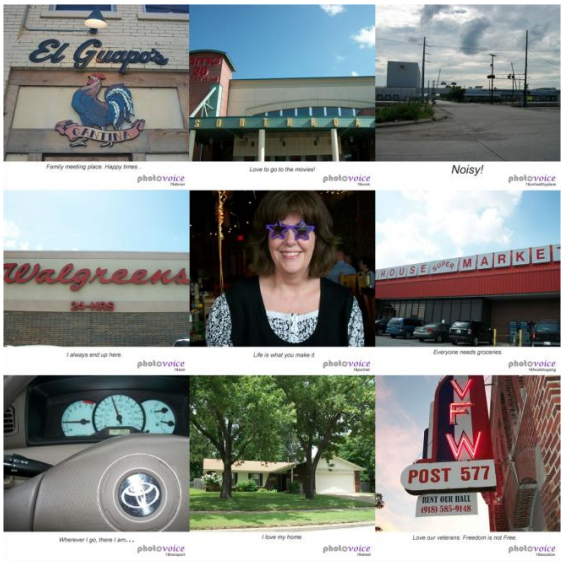

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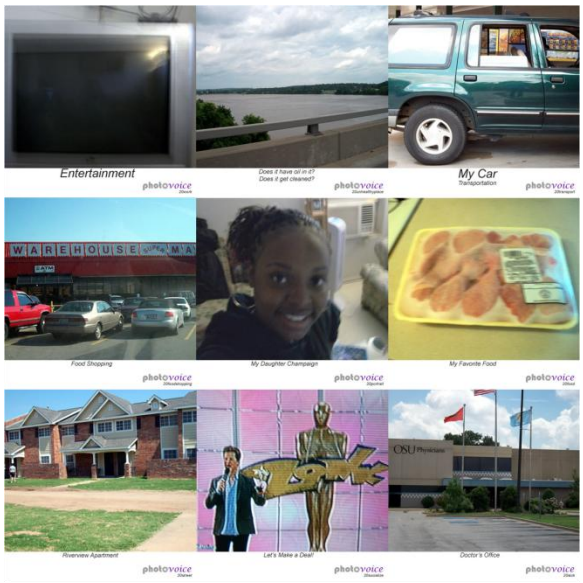
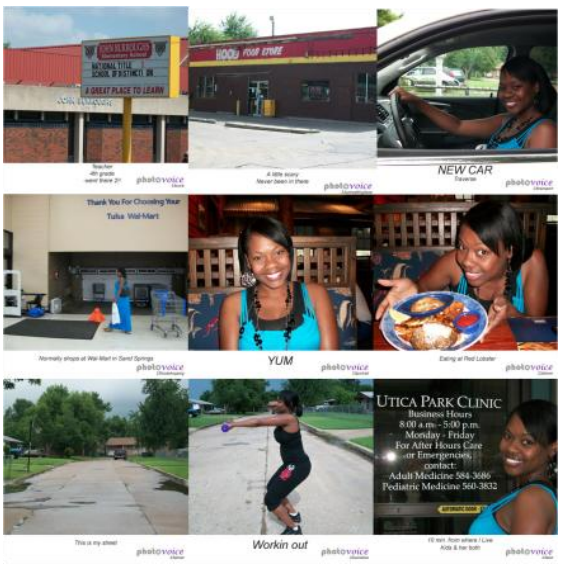


HAWTHORNE

#22

#23



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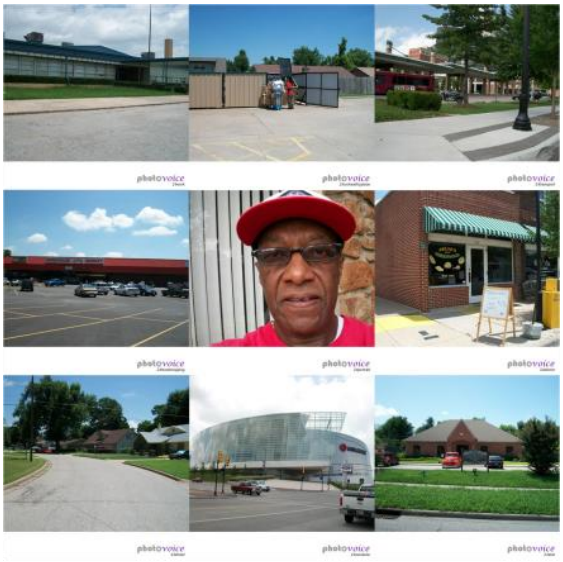
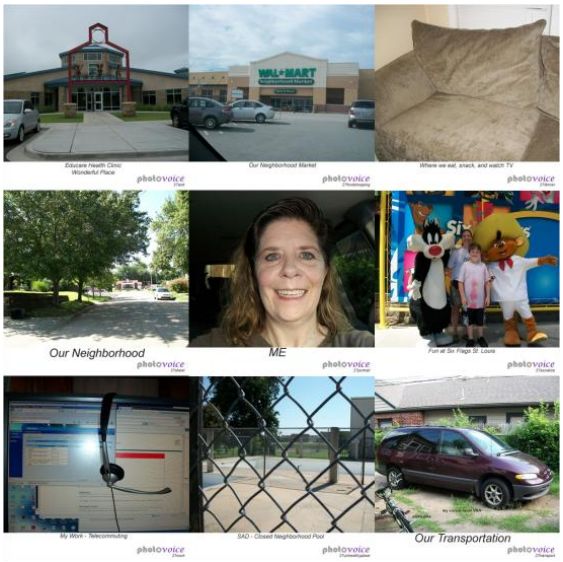


Kendall Whittier

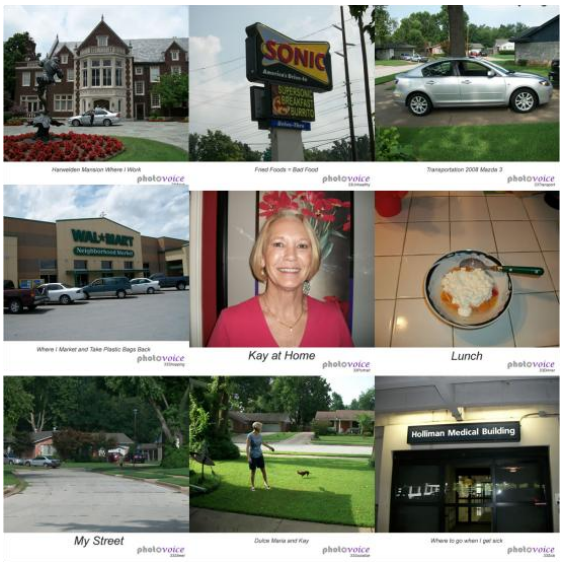
#25

#27



Marshall

#33



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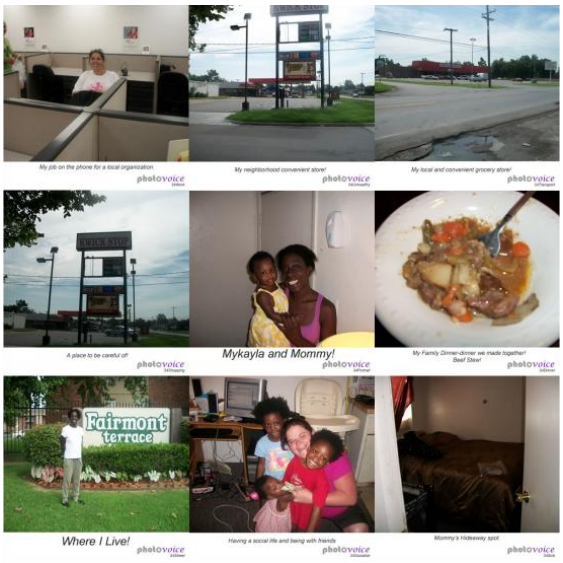

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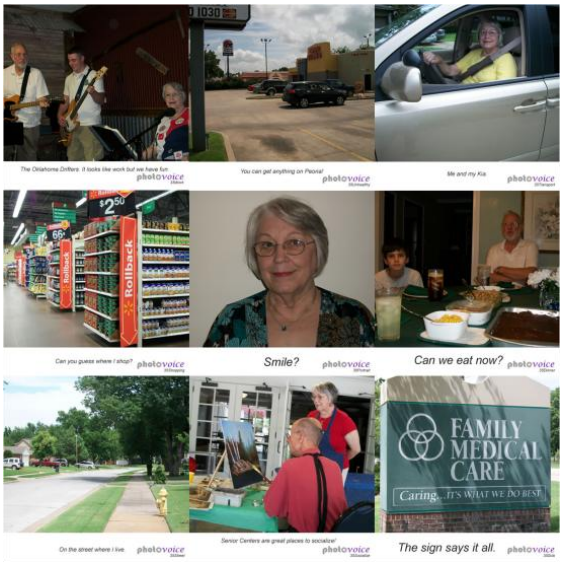

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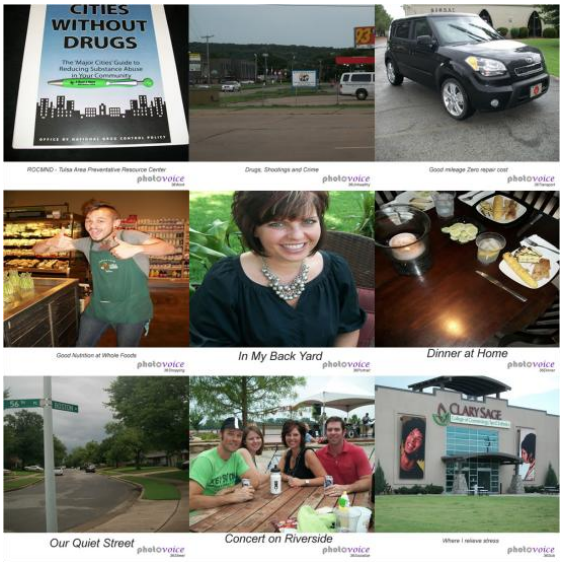
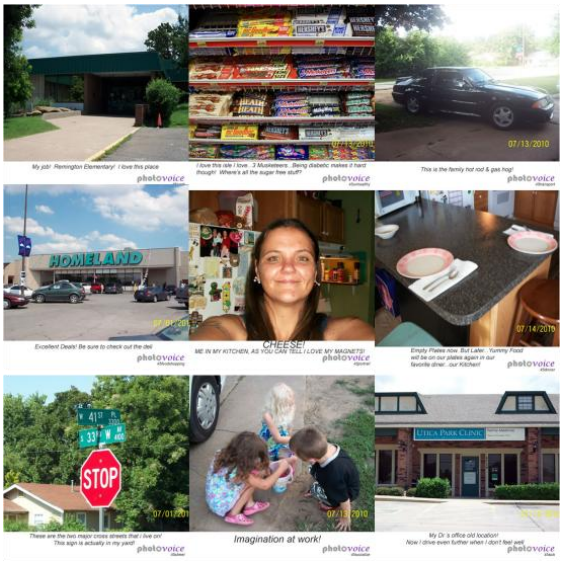


Remington

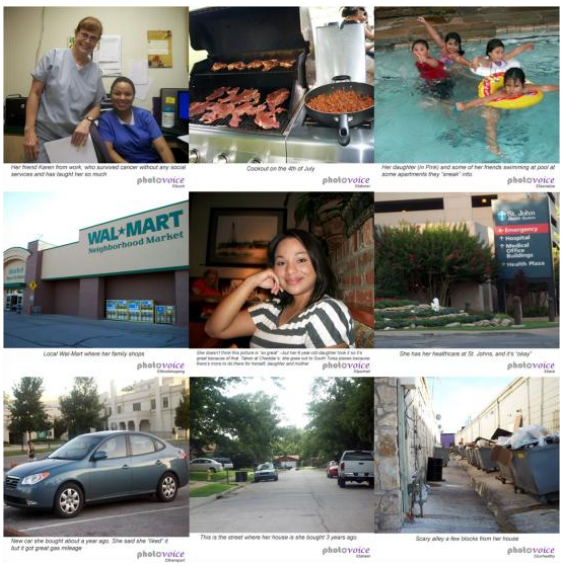
#46

#45



Rosa Parks

#53



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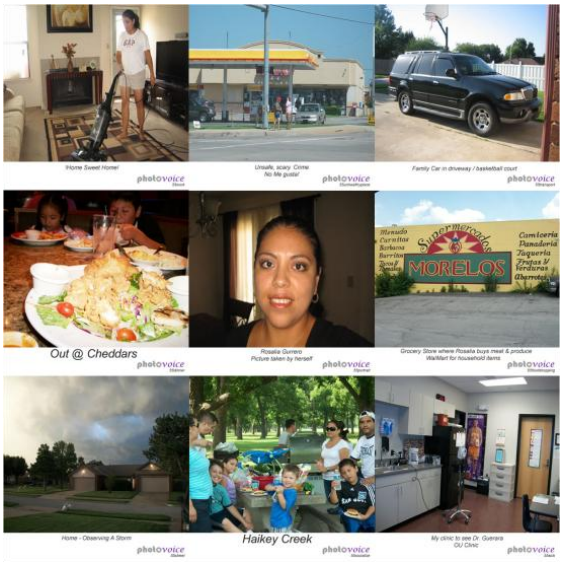
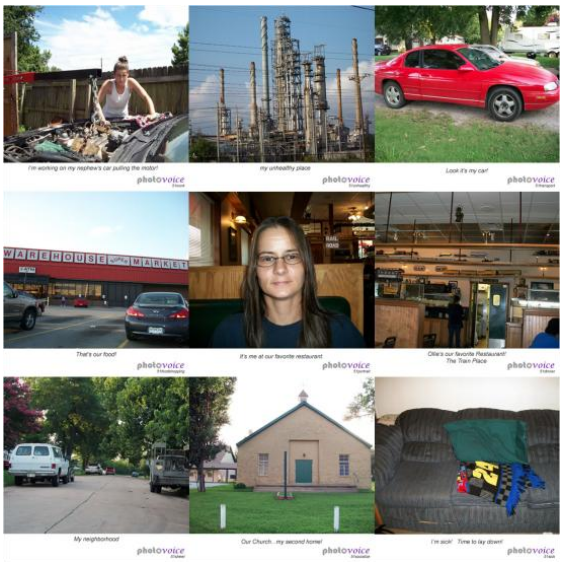


#56

Robertson

#51



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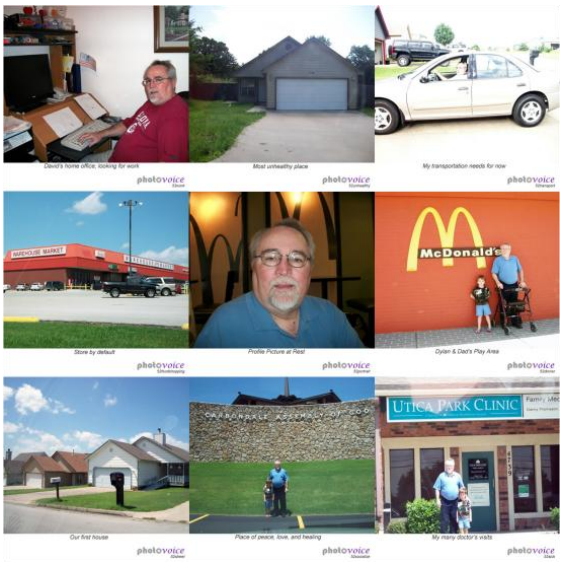

Resources

Tulsa PhotoVoice Website

http://www.tulsaphotovoice.org

This site houses all of the photos taken by participants in the summer of 2009. Photos may be viewed by topic and by participant. The project is briefly described, there is a blog, and links to the project video.

Tulsa PhotoVoice Video

http://www.youtube.com/watch?v=wipg8CpP5V8

This is a video describing the Tulsa PhotoVoice project and the impact it had on the community members who participated. Participants, researchers, and TASCI school coordinators are interviewed in this video.

Tulsa Photovoice on Facebook

http://www.facebook.com/pages/Tulsa-PhotoVoice/