Health and Health-Related Factors of Sudanese Refugees in Lancaster County, Nebraska

A Blueprint Project

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Section One
Population Overview

Although nearly 2.5 million refugees entered the US between 1975 and 2001, few originated on the African continent: 5%, as compared to 52% in East Asia, and 29% in the USSR and Europe (US Bureau of Population, Refugees and Migration 2001). Of those from Africa, just 14%, or 16,171 were from Sudan. Yet Sudan, located in the northeastern Africa, is the continent's largest country and is embattled in the world's longest running civil war. Conflict has affected the country sporadically since 1953, when the British withdrew colonial rule, and continuously since 1983 (U.S. Committee for Refugees, 2003). Sudan is also home to the largest number of internally displaced persons anywhere in the world, a number estimated at four million. At any moment in time, another 500,000 people are living in refugee camps in neighboring countries (e.g., Kenya, Uganda, Ethiopia) or are precariously surviving in countries such as Egypt, Syria and Lebanon (U.S. Committee for Refugees, 2003).

Most of the refugees from Sudan entered the US after 1991. The largest numbers arrived during 2000 when 3,833 individuals born in Sudan were classified as refugees and allowed to immigrate to the US. Both individuals and families were settled among 400 US resettlement sites, including a number of states within the Great Plains. Thus Nebraska, but also Texas, Iowa, Missouri and Kansas accepted refugees from Sudan for resettlement into multiple cities (US Bureau of Population, Refugees, and Migration, 2001). By

May of 2001, 208 Sudanese refugees had been officially relocated to Nebraska (US Bureau of Population, Refugees, and Migration, 2001). Subsequently, many more refugees from Sudan have migrated within the US and are moving to Nebraska to obtain employment, access housing or social services, or to reunite kin networks (Willis and Nkwocha 2002). Although refugee processing has dramatically slowed since September 11, 2001, refugees from Sudan continue to be resettled within Lancaster and Douglas counties. In this report, we provide information concerning Sudanese refugees now living within Lancaster County and the City of Lincoln, Nebraska. We focus on health, an area outlined by the refugees as important to their resettlement success, but include additional factors and issues known to impact one's long-term health status as well.

Section Two
Materials & Methods

Instrument

The 'Sudanese Refugee Health Survey' is a revision of the Nebraska Minority Behavior Risk Factor Survey (MBRFS), itself a revision of the Centers for Disease Control and Prevention's 'Behavioral Risk Factor Surveillance System' (BRFSS) survey. Although, Nebraska's biannual administration of the MBRFS results in data on the health status of minority populations by aggregate, population-specific data is not collected. Because this refugee population is one of the newest within the state and little known, we conducted focus group discussions during 2001-2002 to redesign the MBRFS. We wanted to emphasize issues of value to the Sudanese refugee community, as well as to

health and social service providers that serve Sudanese refugees. We deleted a number of items in the MBRFS that were not relevant to a refugee community from Africa, but we also maintained a core number of items that the Nebraska Health and Human Services' Office of Minority Health felt were important for comparison to other populations within the State. These included items related to driving and seat belt use or ownership of child safety seats, drug and alcohol consumption, and knowledge of diseases such as hypertension, diabetes, and asthma. The final survey instrument contained 17 sections (labeled Section A-Q) and 190 items.

Once the survey instrument was completed, refugees translated and back-translated the entire survey document into one commonly spoken language of Sudan, Nuer, and into a single dialect of Arabic spoken by many Sudanese in Nebraska. The instrument was not translated into Dinka because, after several attempts, we were unable to find a single dialect that could be written and understood by all members of the Dinka community. Dinka is made up of multiple dialects, each of them loosely associated with a region of Sudan and a subtribe of Dinka. The Dinka community in Lancaster County includes at least three of these sub-groups, i.e., Bor, Agar and Ngok Dinka, among those settled in the state. All Dinka respondents had a native Dinka speaker administering the survey items with one exception: a Sudanese Arabic speaker administered the survey for a few Dinka refugees that were fluent in Arabic and comfortable speaking this language as well.

Data Collection, Entry, and Analysis

Data collection began in September 2002 and continued through March 2003. We sampled 263 adults that entered the US as refugees and whose country of origin was Sudan. All were residing in Lancaster County, Nebraska at the time of their participation with the exception of 35 participants of the Maban Tribe who were (at the time of the survey) residents of Omaha. The Nebraska HHS Office of Minority Health offered a small amount of funding for participants in Douglas County. Because it was clear before the data collection began that we could include all of them with using the OMH resources, this single group of Douglas County residents was selected for inclusion and comparative purposes. All participants were approximately 19 years of age and all signed a University of Nebraska Institutional Review Board (IRB) consent form prior to filling out the survey instrument with an administrator. All response items are anonymous.

Survey administrators were all members of the refugee community and represented three tribes: Dinka, Nuba, and Nuer. All refugee administrators received $10.00 for each survey completed. Two of the survey administrators also entered the data into a statistics program, '*Statistica*' and were compensated on an hourly basis for data entry. Data entry began in March 2003 and was completed by July 2003. All surveys that were incomplete and/or that were improperly filled out were eliminated from the final analysis. Should the Nebraska HHS Office of Minority Health provide funds to conduct the 'Sudanese Refugee Health Survey' in additional counties (Douglas and

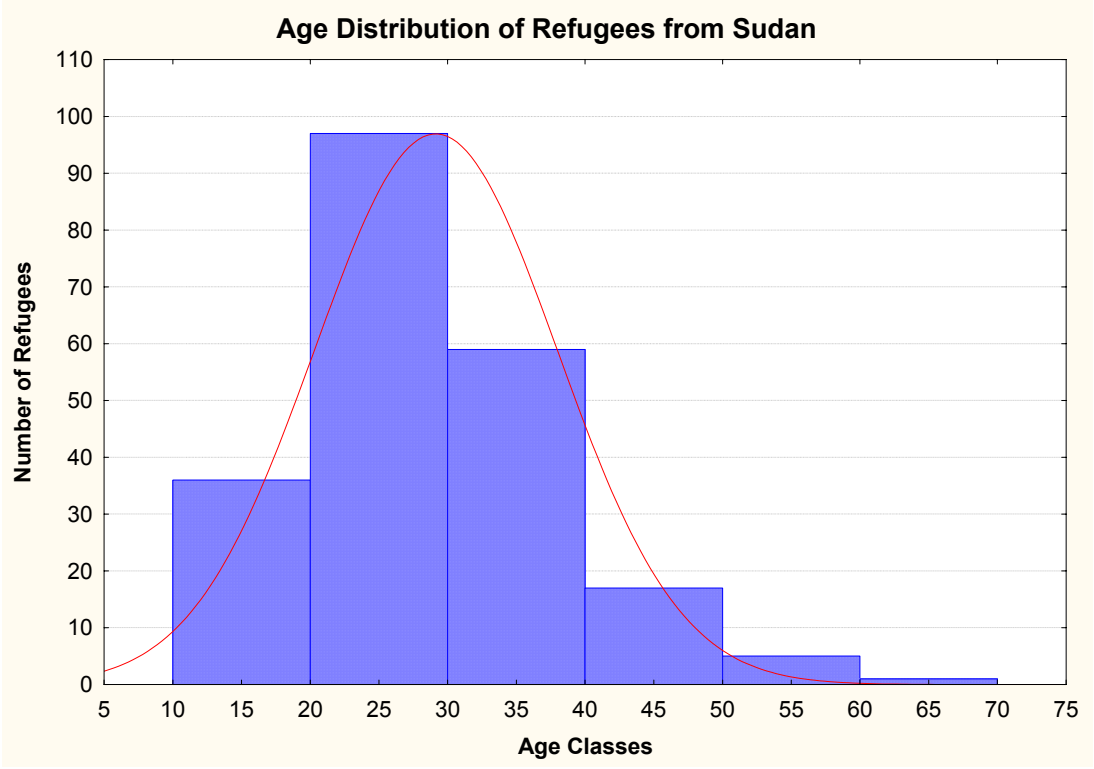
Sarpy for example), we will complete and correct those from Lancaster County and incorporate them into a larger data base.

Section Three
Demographics

Participant Characteristics

In all, 263 refugees from Sudan participated in this survey. Of these, 228 reside within Lancaster County and 35 live within Douglas County. One hundred seventy three were male and 90 were female. Forty-seven participants did not know their current age or did not wish to reveal an age, however, 214 participants listed an age in the range of 16 to 57 years (Figure 1). The mean age of all participants was 29 years.

Figure 1: Sudanese Refugee Health Survey Participants by Age



All but three of the 263 participants were born in Sudan: one was born in Ethiopia, one in Kenya, and one respondent did not indicate a country of origin. The participants identified themselves as members of one of 14 tribes of Sudan: Nuer, Dinka, Shilook, Nuba, Murle, Acholi, Bai or Bari, Maban, Burun, Azandi, Uduk, Fritit, and Beja. Three tribes represent nearly half of the participants and had the highest participant representation for this survey. They are, in order, the: (1) Dinka, (2) Nuer, and (3) Nuba. Fifty seven percent of the participant population indicated that they were married, while 36% marked 'Never been married' in response to a question concerning marital status. However, nearly 75% of the Nuer and Nuba participants are married while by contrast, just 39% of the Dinka population participants currently have a marital status.

As shown in Table 1, 73% of refugees from Sudan that now live, or have recently lived, in Lancaster County arrived in the US between 1999 and 2001. The mean year of arrival was 1999. However, during the 15 years that refugee survey participants from Sudan were resettled in the US, 1987 to 2002, most (29% of those participating in this survey) arrived during the year 2000. Although all survey participants qualified for refugee status at arrival, three distinct federal classifications were used by the refugees to enter the US. These include refugee (92%), immigrant (5%), or political asylee (2%). Three participants (1%) did not choose to select an arrival classification.

Table 1: Year of Arrival in the US for Refugees from Sudan

Year of Arrival	Number	Percent
1987	1	.4
1992	2	.8
1993	3	1
1994	9	3
1995	19	7
1996	3	1
1997	10	4
1998	10	4
1999	54	**21**
2000	76	**29**
2001	61	**23**
2002	15	5.7
TOTAL	263	100

Although 41% of the refugees that participated in this survey, and that now live in Lancaster County, marked Nebraska as their primary resettlement site, the remaining 59% were settled in one of 26 other states (Table 2) prior to moving to Nebraska. Five states served as primary resettlement sites for the next largest percentages of Sudanese refugees now living in Lancaster County, Nebraska. In ascending order of settlement, numbers are as follows: Iowa, 9.1%, Texas, 8.3%, and Georgia, Minnesota and Tennessee with 3.4% each. All other states were primary settlement sites for eight or fewer Sudanese refugee respondents, accounting for 3% or less of the population total.

Table 2: State of Primary Resettlement for Refugees from Sudan

STATE	NUMBER	%	STATE	NUMBER	%
ARIZONA	2	.8	MICHIGAN	2	.8
CALIFORNIA	4	1.52	***MINNESOTA***	9	3.4
COLORADO	8	3.03	MISSOURI	6	2.3
DC	10	3.8	***NEBRASKA***	109	41.3
FLORIDA	1	.4	NEVADA	1	.4
GEORGIA	9	3.4	NEW YORK	8	3.03
ILLINOIS	1	.4	NORTH CAROLINA	1	.4
IDAHO	1	.4	NORTH DAKOTA	1	.4
IOWA	24	9.1	SOUTH DAKOTA	10	3.8
KANSAS	2	.8	***TENNESSEE***	9	3.4
LOUISIANA	5	1.9	***TEXAS***	22	8.3
MASSACHUSETTS	4	1.5	UTAH	4	1.5
MAINE	2	.8	VIRGINIA	6	2.3
			WISCONSIN	1	.4
Totals: *27 States*			*262 Survey Responses*		*99.58% of Total Participants*

Bolded states served as primary settlement sites for the largest number of Sudanese refugees.

On average, refugees had moved from a range of one to four states before settling in the State of Nebraska. As to why they moved to the State, 81 or 49% of 167 refugee participants marked 'Family' or 'Friends' as the reason that Nebraska became their home. Nineteen percent of participants marked education, 13% marked cheaper housing and/or job/employment options, 5%

indicated financial assistance, and 3% selected 'Knew of the Sudanese community/wished to be near other Sudanese' as a reason for moving to Nebraska. Two percent of the Sudanese refugee population selected 'other' as the justification for a move to Nebraska. One of these indicated that better security [safety for his family] was necessary. Although most refugees marked just one reason for moving to Nebraska, a range of two to five reasons for changing the state of residence was offered by respondents.

Section Four
Language Skills and Training

Of the 263 respondents, 65% indicated that they have taken an English language learning course since arriving in the United States. In comparison, 33% have not taken a course to improve English language skills since they were resettled in the US. This issue does not appear to be linked to sex because results for all sexes or for one sex are nearly equal. For example, among 85 female survey respondents, 68% have taken a language class (n = 58) while 32% (n = 27) have not. Within Nebraska, refugees received ESL/ELL training through one of nine possibilities. In order of assistance, these include training provided or financed through high school courses (13%), Lincoln Literacy Council (9%), churches (8%), community colleges (8%), universities (3%), agencies in other states (3%), Southern Sudan Community Association (3%), Lincoln Housing Authority (2%), and self support (2%). Three of these assistance sources require that the refugees pay for their training, i.e., refugees

must pay tuition to support language training in community colleges, universities, and self-financing.

Refugees speak a range of one to six languages however most of these are tribal languages not spoken outside of Sudan. Only 19 of 263 respondents (7%) noted that they use English as the main language at home or use English at all while in the home. The use of language at home has no relationship to whether or not the respondent speaks English at work or at school.

Section Five

Education, Vocational Training, Employment

Thirty eight percent of respondents have completed high school, obtained a GED, began college, graduated with a BA or BS, and/or earned a professional postgraduate degree (Figure 2). By contrast, 55 % of the refugees from Sudan have not earned a high school diploma and, among those that did not complete high school, 25% did not attend school beyond the eighth grade. In addition, for those refugees from Sudan that attended school for any length of time, the vast majority (66% of the 263 respondents), did so outside of the US: in Sudan, in a refugee camp, or in a different non-US site (Figure 3).

Figure 2: Level of Education Achieved at Any Site

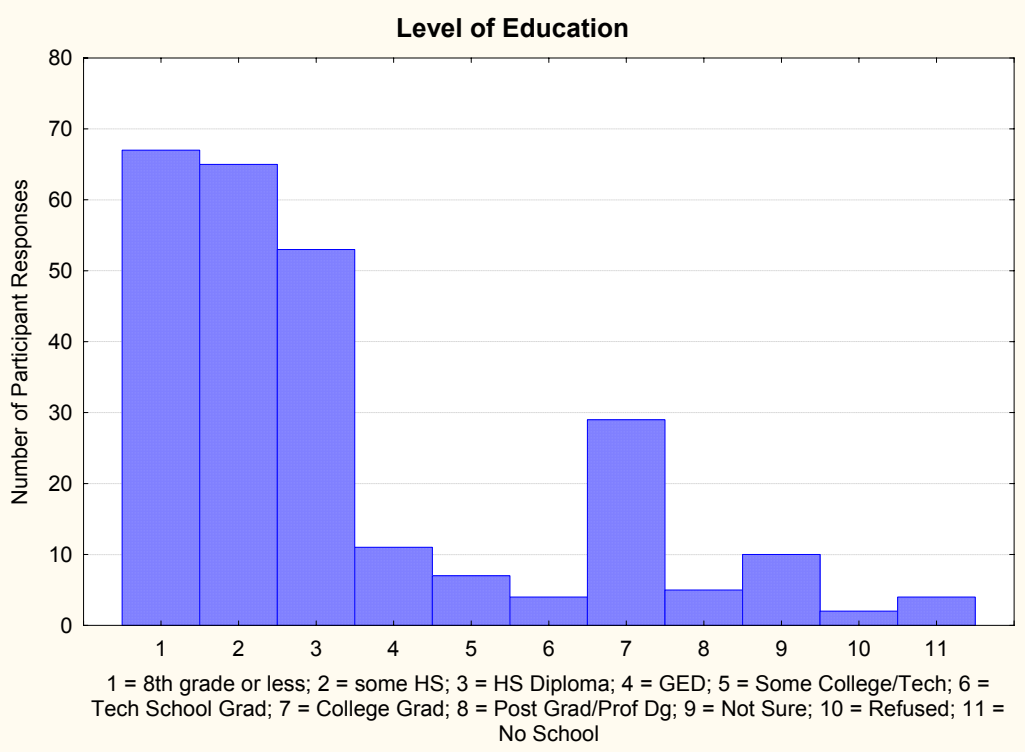
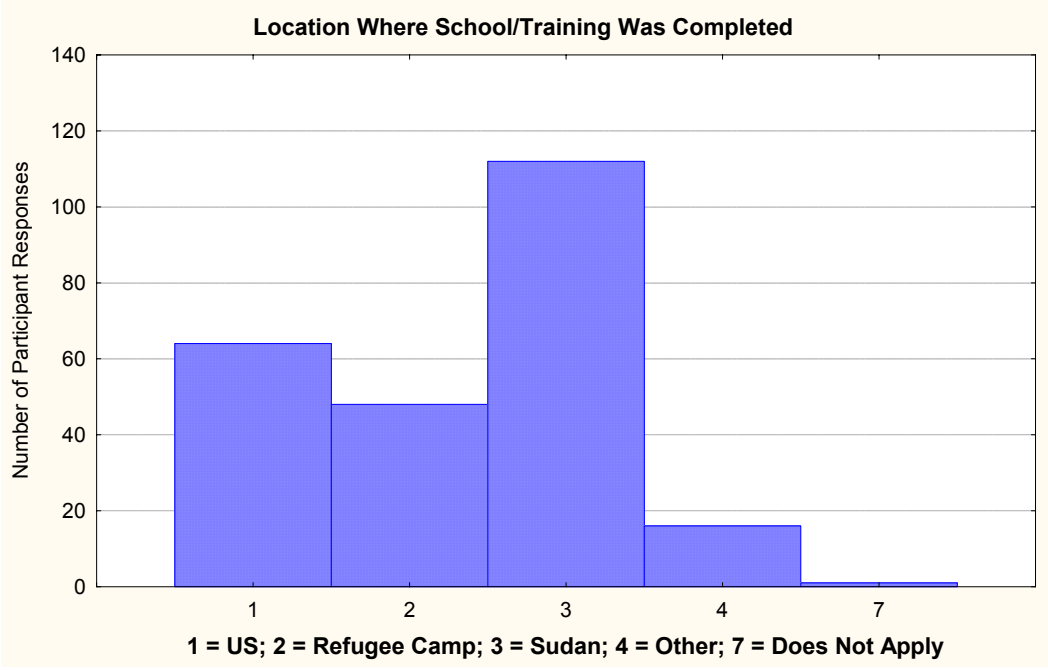
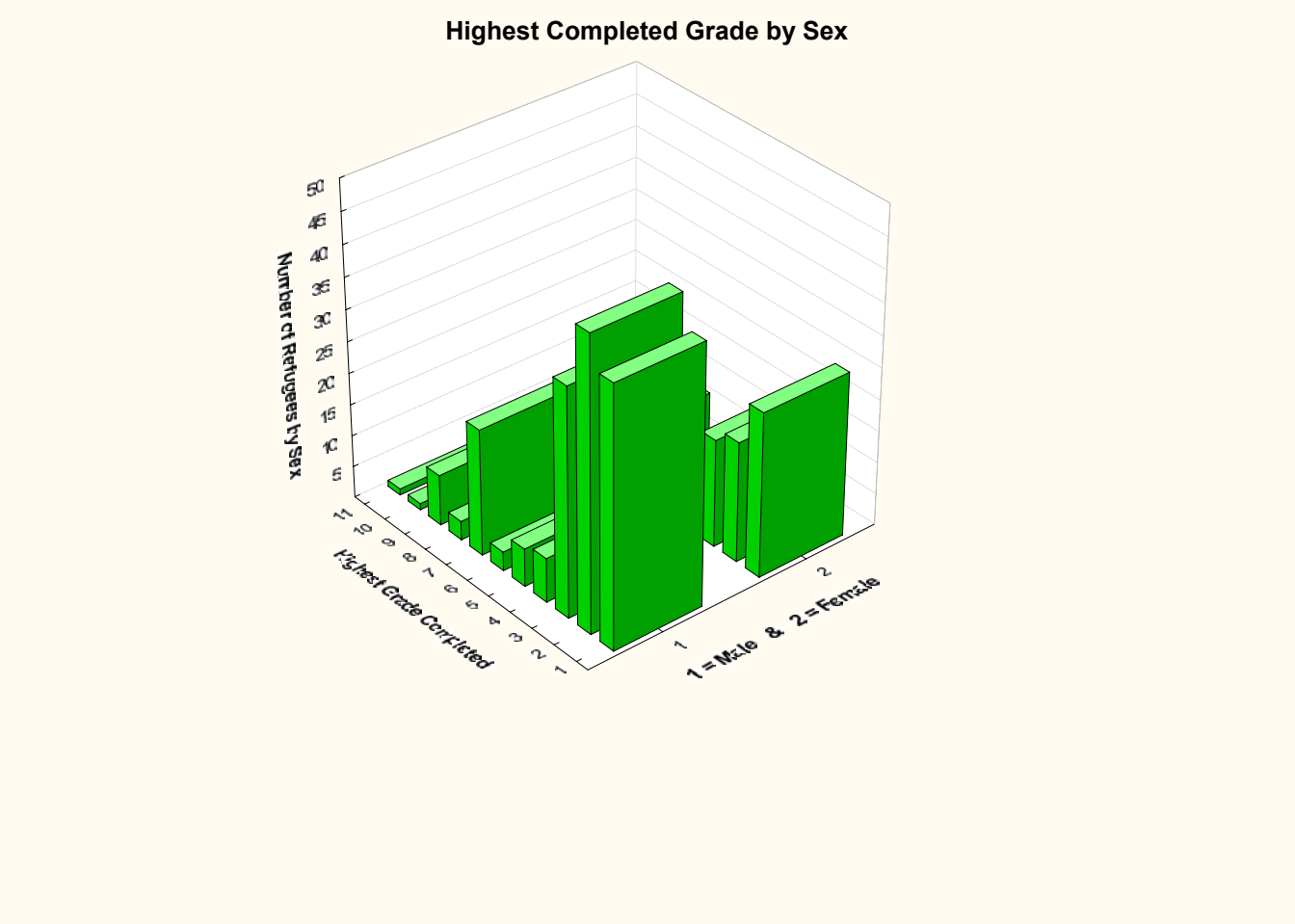


Figure 3: Site Where Education Had Been Completed



In every category, males have completed more education than females, although the percentages for each category are similar (Figure 4). Twenty one percent of males and 20% of females that made a selection regarding the highest level of school achieved, n = 255, earned a high school diploma. Fifty-four percent of females did not complete high school while 51% of males were unable to earn their high school degree. The percentages of both males and females by tribal affiliation that did not complete high school were comparable. For example, 44%, 52%, and 42% of the Nuer, Dinka, and Nuba respondents did not complete high school. The Nuer had the highest percentage of respondents that did not attend school beyond the eighth grade, 23%, while 16% of the Dinka and the Nuba respondents have not completed school beyond an eighth grade level.

Figure 4: Comparison of Education Level Achieved by Males and Females



Fifty-two percent of refugee respondents indicated that they would like to have the opportunity to earn a 'General Education Diploma' (GED) while in the United States. However, more than half of those that wish to earn a GED, n = 76 or 57%, do not know where GED preparation courses are offered. Moreover, the same number of respondents that indicated they wished to obtain a GED also noted that they currently work, 137 or 52%. Twenty three percent (n = 30)

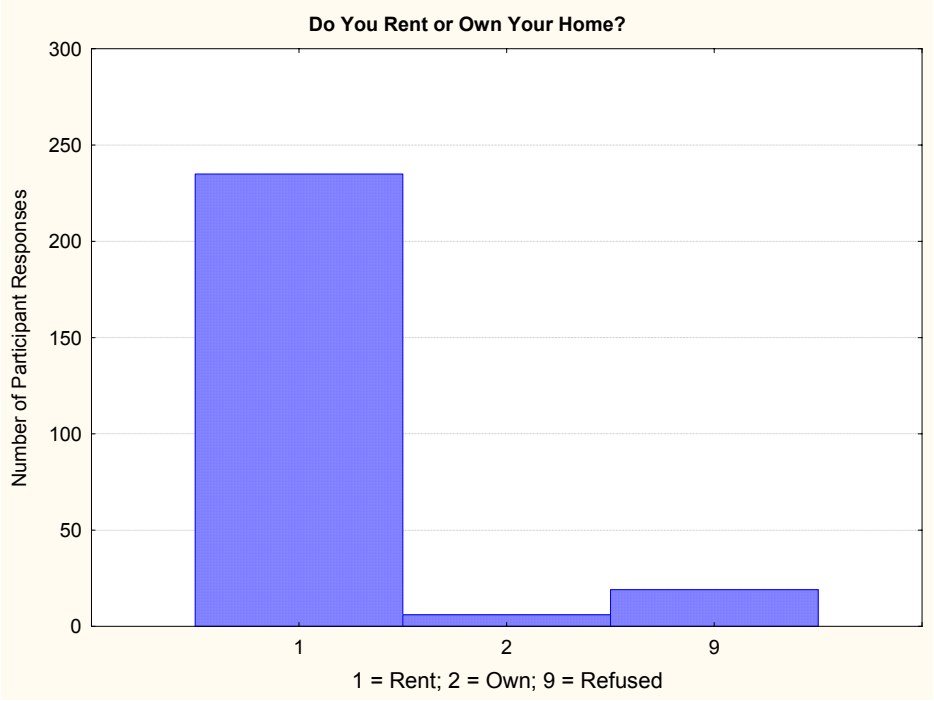
of those that currently work are seeking other employment while 62% (n = 69) of those unemployed are searching for a job.

One hundred one respondents (38%) did not know or refused to acknowledge the amount of the average annual income for their household from all sources. Another sixty percent have an annual household income of $35,000 or less, while the majority of respondents, 56%, bring home a before-tax annual income of $25,000 or less.

Section Six
Housing Issues

All but six of the refugee respondents indicated that they rent a home or apartment in Nebraska (Figure 5). Nineteen respondents did not indicate whether they rent or own their current dwelling. Only fourteen refugees (5%) affirmed that they carry renter's insurance to cover potential loss or damage to their property. Just 16% (n = 43) of participants are living in a house or apartment that was located for them by a resettlement agency. Eighteen percent of respondents are renting a dwelling that a Sudanese community member helped them to find while the largest number of refugees (n = 84) are living in an apartment or home located through the Lincoln Housing Authority. Another 8% of refugees found their current residence through assistance at their church while 13% received help in locating an apartment through a non-Sudanese friend.

Figure 5: Sudanese Refugee Home Rental Rate



Section Seven

Seat Belts, Driving, Car Insurance

Seventy five percent (n = 197) of the 264 refugee participants reported that they currently drive automobiles, have a driver's license, and/or have purchased car insurance. Another eight percent of refugee participants have a learner's permit. Five participants with a driver's license report that they do not carry automobile insurance while three of those with a driver's permit report that they do not carry auto insurance coverage either. However, the majority of Sudanese refugees that indicated that they drive also noted that they carry car insurance and a driver's license.

Fourteen respondents also acknowledge that they did not use a seat belt each time that they drive or ride in a car. Another five respondents were unsure of how often they engage a seat belt while driving or riding in an automobile. The majority of refugees indicated that they used child car seats when transporting children in an automobile. However, a small percentage, 5%, said they did not own or use child protective seats due to the high cost of purchasing such a seat. Another 2% suggested that their automobile is not equipped with seat belts and therefore, the child protective seats could not be secured. While 38 respondents knew where low cost seats could be purchased and/or which agencies provided child safety seats free of charge, 177 respondents did not know where they could find seats that are low cost or free to low income families.

Finally, only 26 (nearly 10%) of 263 refugee respondents own a bicycle. Of these, six or 23% do not own a helmet.

Section Eight
Exercise

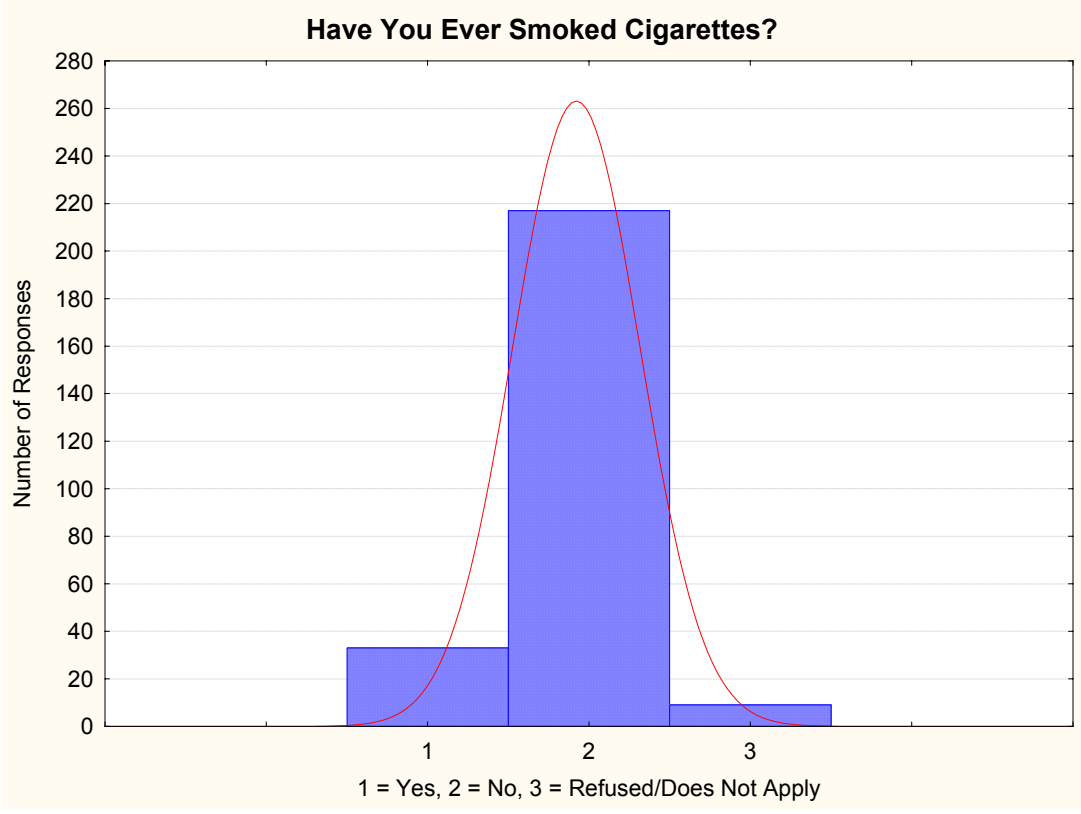
Sixty-two percent (n=164) of refugee respondents indicated that they walk to appointments and/or to the store. Another 41% marked physical activity as a part of their life in the past month while 54% indicated that they did not engage in physical activity during the past month. The sport of soccer (n = 44 or 17% of 263) was marked as the most common physical activity engaged in by the Sudanese refugee community while basketball, walking

and/or running were also listed among the physical activities performed by a small percentage of community members.

Section Nine
Tobacco Use

As illustrated in Figure 6, 84% (n = 217) of the refugee respondents have never smoked. By contrast, 13% (n = 33) marked that they have smoked at some point in their lives while 3% (n = 9) refused to respond to the question, 'Have you ever smoked cigarettes?' Of those that smoke, 16 or 48% indicated

Figure 6: Refugee Respondent Smokers versus Nonsmokers



that they smoke every day (Table 3). Another 27% (n = 9) acknowledged that they smoke on some days but not every day while 18% (n = 6) of one-time smokers do not now smoke at all. Two of those that indicated that they had smoked in the past did not wish to indicate whether they currently smoke. Eighty-eight percent (n = 29) of those refugees from Sudan that indicated that they had ever smoked were male while just 12% were female (n = 4).

Table 3: Refugee Responses Regarding Current Smoking Practices

	Every	Some	Not at All	Refused	Totals
1 = Yes	16	9	6	2	33
2 = Never	0	NA	141	3	144
7 = Not at All			7	1	8
Total	16	9	152	6	185

Section Ten
Alcohol Consumption

Refugee respondents indicated that alcohol consumption patterns are nearly identical to reported smoking habits: 215 respondents noted that they have never consumed alcohol while 34 have consumed alcohol one or more times in their lives. One respondent marked 'does not apply' while nine did not make any indication concerning alcohol consumption. Finally of the 34 individuals that indicated that they have had a drink at least once in their lives, all were male. The mean age at which males began drinking was 24 years of age, although respondents indicated that they had tried alcohol for the first time in the age range of 18 to 40 years.

Section Eleven
Women's Health Issues

Twenty nine or 32% of 90 female respondents have had a breast exam provided by a health practitioner. However, 50 or 56% noted that they had never had a clinical breast exam during their lives in Sudan, a refugee camp or in the US. Eight of the total 89 female survey participants did not indicate whether or not they had ever had a clinical breast exam. Moreover, just 19 of the 89 female participants in this survey currently conduct their own monthly breast examination. Fourteen percent (n = 13) of the female participants had had at least one mammogram during their lifetime while 67% (n = 60) have never had such a scan of the breast tissue. Among female respondents 35 or older (n = 7), four had received at least one mammogram while three had not had such an examination since arrival in the US.

Although 22 or 24% of 90 female participants indicated that they had experienced at least one pap smear during their lifetime, 54% marked that they had never had such an exam. In addition, 20 or 22% of 90 female survey respondents indicated that they had experienced female circumcision while in Sudan. Tribal affiliation for those that had experienced circumcision included women from six of 14 tribes: one Nuer, two Dinka, 11 Nuba, one Acholi, four Azandi, and one Beja.

More than half of all female respondents had been pregnant within the last five years: 53% of the female participants or 48 of 90. Four (8%) out of 48

women did not receive prenatal care during a pregnancy in the last five years (Table 4).

Table 4: Month of Prenatal Care During Most Recent Pregnancy

Category	***Count***	***Percent of 48 Female Participants Pregnant in the last 5 years***
No Visit in Pregnancy	4	8%
Before Month 3	30	63%
Month 3	6	13%
Month 4	3	6%
Month 5	0	0
Month 6	2	4%
Month 7	1	2%
Month 8	0	0%
Month 9	0	0%
Not Sure	2	4%
Women Pregnant in last 5 years	**48**	100%
Not Pregnant in Last 5 years	23	
Cannot Remember/ Refused	19	
TOTAL FEMALE RESPONDENTS	90	

By contrast, 63% of refugee females from Sudan (30 of 48) received prenatal care before the third month of gestation during a pregnancy within the last five years. Three women did not get prenatal attention until month six, seven or

eight and two women were unsure about prenatal care. Another 23 women marked that they had not been pregnant in the last five years.

Eighty six of 90 female respondents marked one of five possible responses concerning breastfeeding. Fifty-one females indicated that they breastfed during their last pregnancy. By contrast, 11 women indicated that they did not breastfeed: six indicated that work schedules prevented them from breastfeeding while four suggested that breastfeeding had simply been too difficult. Seven women indicated that they would like to have more education related to breastfeeding while 50 women indicated that they did not need to be educated about breastfeeding practices or techniques.

Section Twelve
Children's Issues

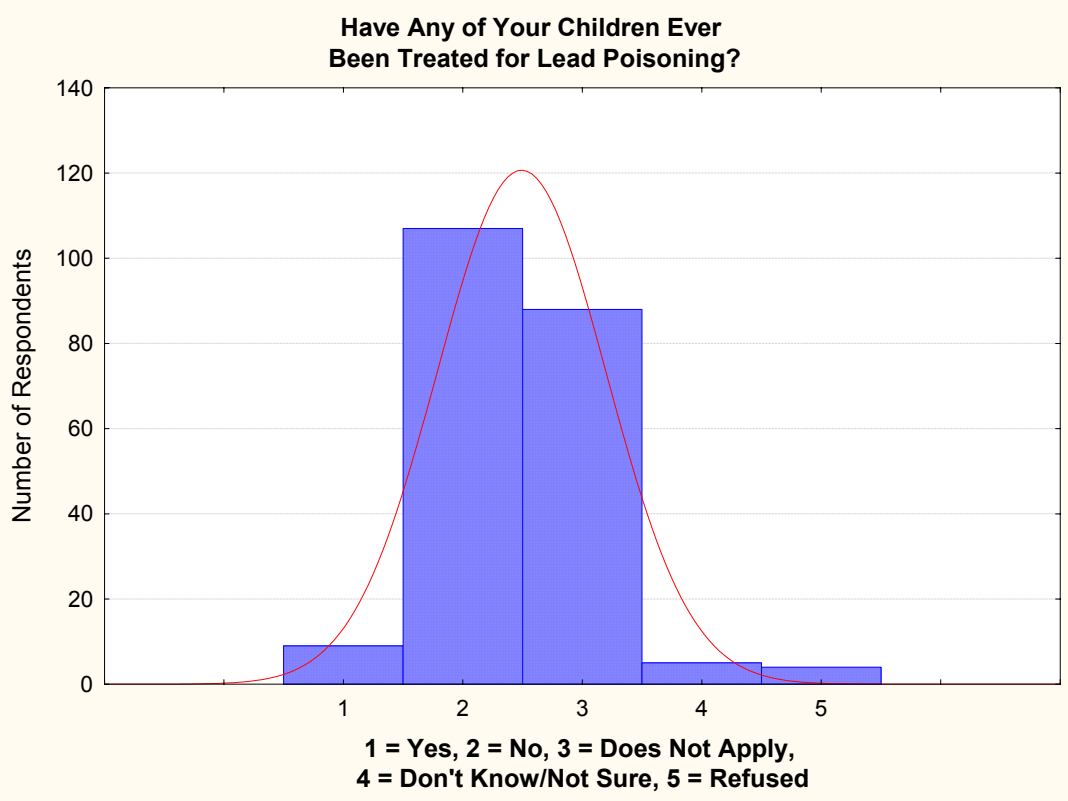
Refugees from Sudan report that they have from one to ten children in their current residence or household for which they are the primary caretaker. In addition, 32 individual refugee parents indicated that they have one or more children in Africa that they are currently supporting, sending money to one of several African countries on a regular basis. Twenty five parents indicated that their children arrived in the US with 'sad or angry' feelings and that these feelings may be contributing to difficulties experienced in the Nebraska public school system.

All refugee parents indicated that their children were vaccinated for DTP (97%), polio (96%), measles/mumps/rubella (MMR) (95%), hepatitis A (90%) and hepatitis B (88%), or they indicated that they were 'unsure' if their children

had received such vaccinations, at 3%, 4%, 5%, 11%, and 11% respectively. One hundred thirty two parent respondents noted that they use over-the-counter treatments when a child is ill. Of these, 40 expressed a need for training in over-the-counter medicines, from situations that are appropriate for medicinal use to brand names and prices. Seventy one parent participants noted that they do not use over-the counter treatments and only 14 of these indicated that they would like to receive training in such medications or were not sure if they needed training for such treatments.

Respondents were asked if any of their children had ever been treated for lead poisoning and as shown in Figure 7, 111 of 213 parent respondents noted that their children had not been treated. By contrast, 9 respondents affirmed that their children had been treated for lead poisoning. Another 61 respondents with children indicated that their children had not been, three respondents were unsure about whether their children had been treated for this condition while another four 'refused' to respond to this question.

Figure 7: Lead Poisoning Among Children of Respondents



Ninety six parent respondents indicated that they need to locate and secure childcare for their children at some point during the day or evening. For these respondents, plus 38 additional parents that currently have childcare (n = 129 total), information about reliable childcare at a reduced cost is needed.

Section Thirteen

HIV/AIDS

One hundred eighty respondents indicated that they knew what HIV/AIDS is however, 80 of these respondents also marked that HIV is the same entity as AIDS. Thirty-seven participants noted that they did not know what HIV/AIDS is, but at the same time, nine of these marked that HIV and

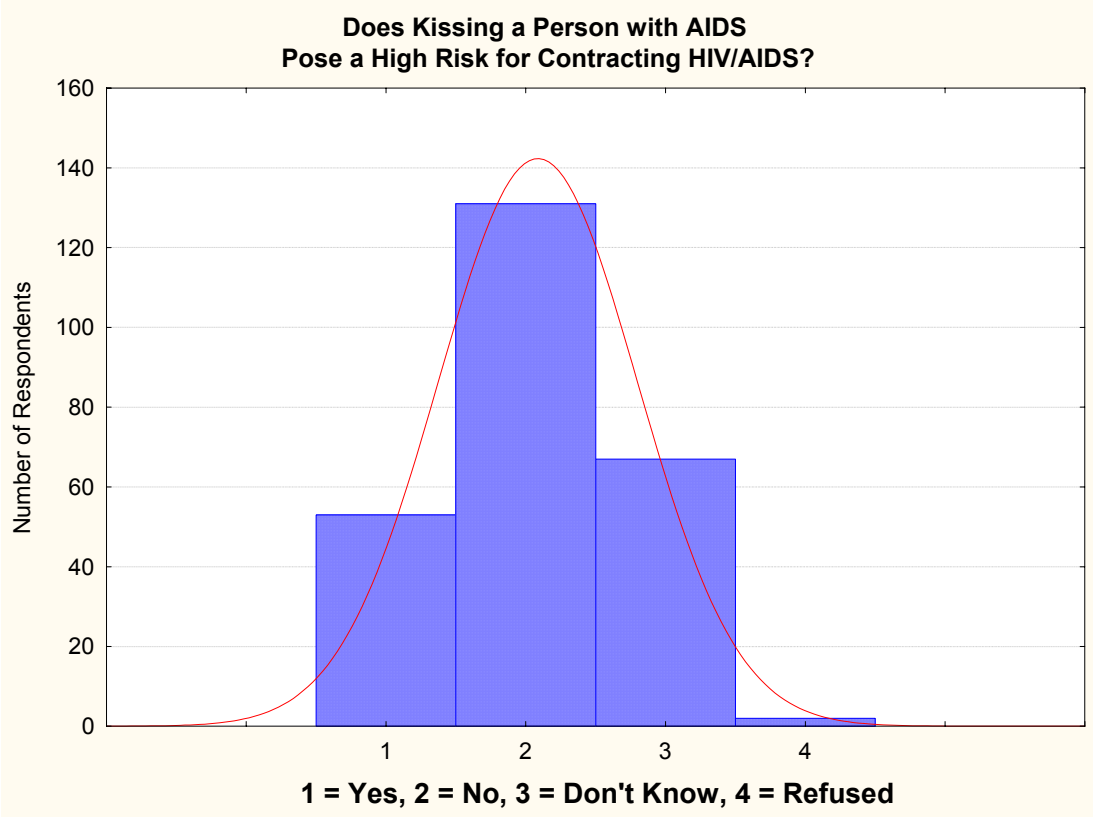
AIDS are not the same disease state. Seventy percent of the refugee respondents (n = 185) indicated that women could pass HIV to their unborn children while 7% (n = 18) said that such transmission could not occur. Another 19% of respondents were unsure about transmission of HIV from mother to unborn child. Two respondents refused to respond to this question regarding mother-infant transmission of HIV and another six responses (2%) were missing.

Seventy-eight percent of refugees (n = 206) indicated that sharing needles was a high risk behavior for contracting HIV. By contrast just 2% (n = 6) said that needle sharing was not likely to result in HIV. Another 15% (n = 39) did not know if sharing a needle constituted high risk behavior, 1% (n = 2) refused to respond and 4% (n = 10) did not provide a response at all. Regarding condom use and HIV and multiple partners, 223 participants (85%) indicated that not using a condom and engaging in sexual practice with more than one partner was high risk behavior. Three percent (n = 7) marked condom use as unrelated to HIV contraction, another 22 (8%) did not know if there was an association between condom use and HIV, two (1%) respondents did not wish to indicate their understanding and 9 individuals did not mark any of the response options.

As shown in Figure 8 below, 20% of refugee respondents indicated that one can contract HIV/AIDS by kissing someone with full blown AIDS. However, 50% did not feel that kissing an infected person would result in disease transmission. Another 25% of respondents were unsure if kissing an

infected person posed a risk and 5% refused to answer and/or did not respond at all to the question, "Is kissing a person with AIDS a high risk behavior for contracting the disease?"

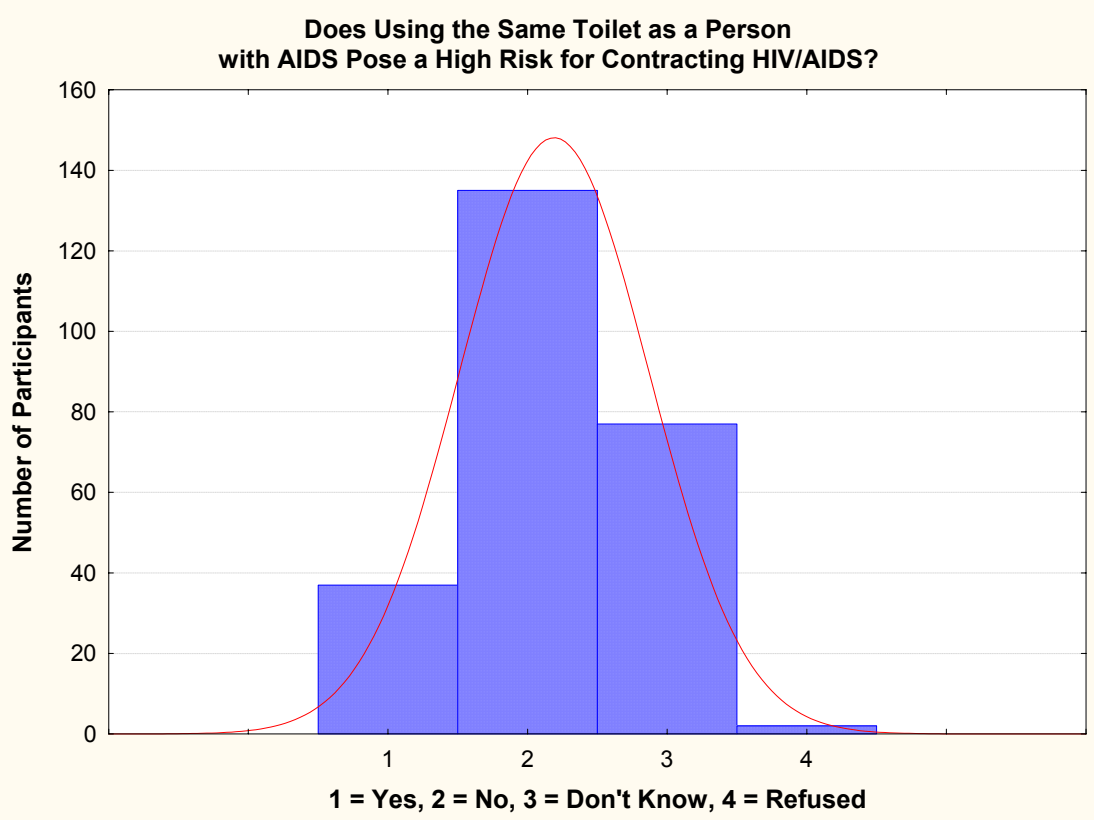
Figure 8: Knowledge of Kissing and the Relationship to HIV Infection



Nineteen percent of respondents thought that HIV/AIDS could be transmitted through mosquitoes while 50% were certain that a mosquito bite was not a mode of disease transmission. An additional 25% were unsure of a link between mosquitoes and HIV/AIDS. Fourteen percent of participants indicated that using the same toilet as an infected person might result in the transmission of HIV/AIDS, however 51% did not feel that toilet seats could be

conduits for HIV (Figure 9). Another 30% or respondents were unsure about this mode of transmission. Two participants refused to respond to this particular question regarding HIV transmission and 12 responses were left blank.

Figure 9: Risk of Contracting HIV and Toilet Use

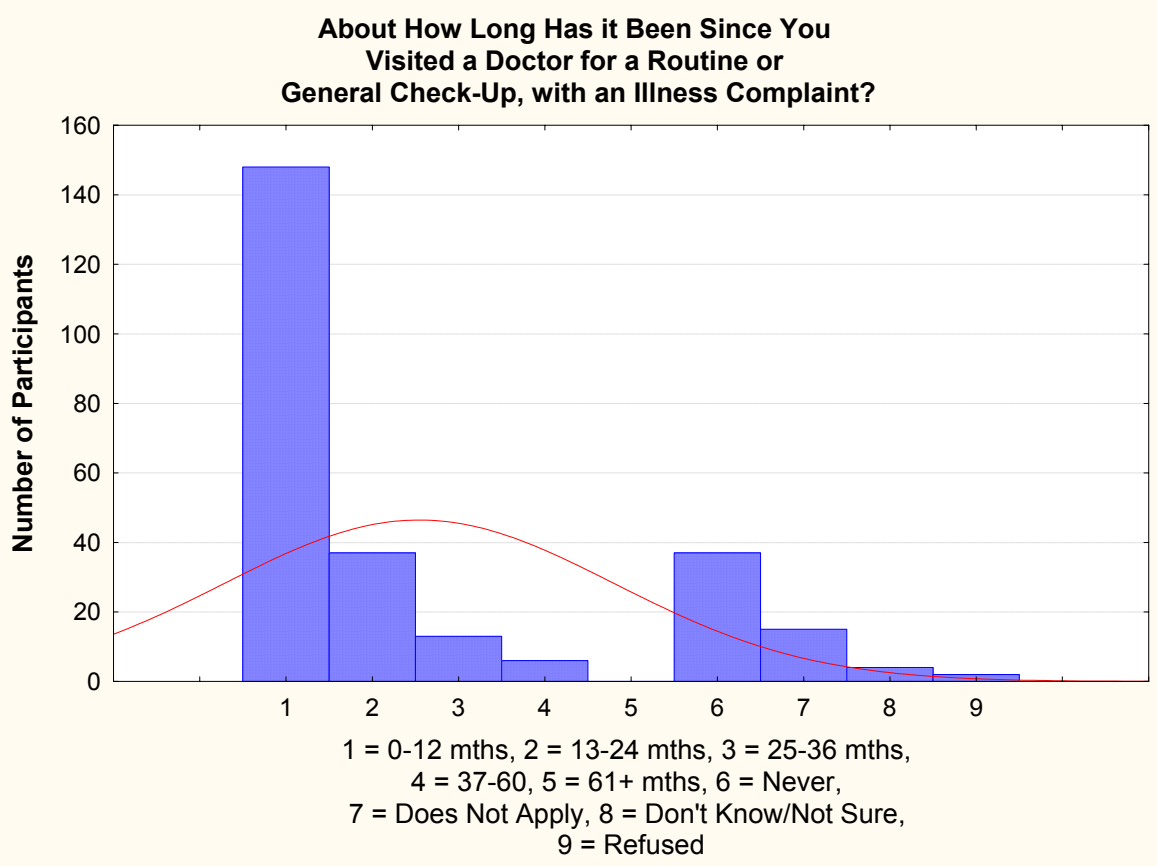


Section Fourteen
Preventive Health Practices

Seventy-eight percent of all refugee participants have had a routine check-up by a physician within the last five years (Figure 10). Nevertheless, 14% had not visited a doctor for a routine exam since they came to the US and an additional 2% were unable to remember when or if they had ever had a

routine physical exam (Figure 10). One percent of participants did not respond to the query regarding routine health care or did not wish to respond.

Figure 10: Time of Last Medical Exam by a Health Professional



Thirteen percent of the participants (n = 36) felt that they are still suffering from a condition that started in Africa but that has not been addressed since they arrived in the US. Sixteen percent of the refugee respondents acknowledged that they had intestinal difficulties that could be linked to parasites acquired before they left Africa. Finally 27% of respondents reported that they experienced gun shot wounds, stabbings, or beatings prior

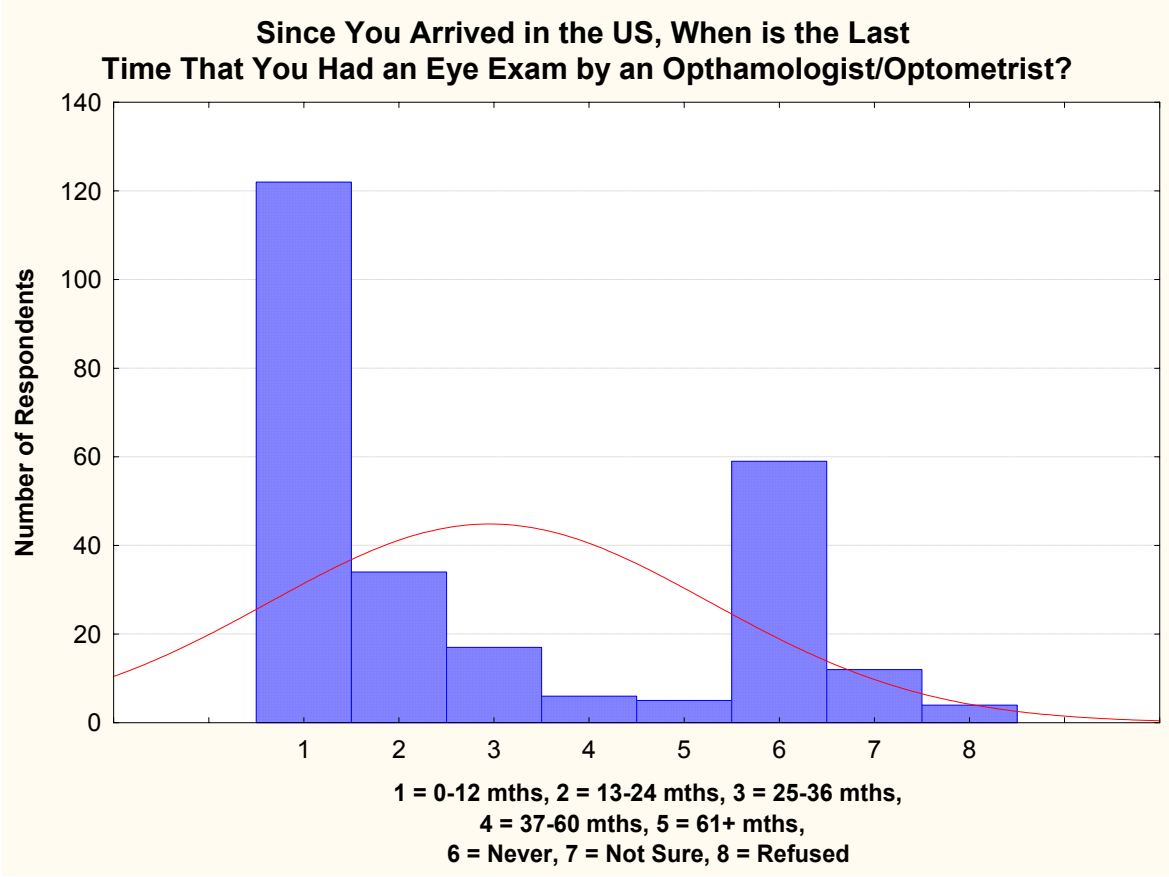
to leaving Sudan and/or during the time that they lived in refugee camps (Table 5). Another 38% of respondents refused to indicate whether they had suffered any of the former listed traumas while 14% did not mark any of the available options. Finally 54 respondents marked, 'Don't know/Not Sure' in response to this question (Table 5).

TABLE 5: Injuries, Suffered Experiences While in Sudan or Refugee Camps

SUFFERED IN SUDAN AND/OR IN REFUGEE CAMP	Count	Cumulative	Percent	Cumulative
Gun Shot	7	7	2.66	2.66
Stabbing	13	20	5.32	7.98
Beating	50	70	19.01	**26.99**
Don't Know/ Not Sure	54	124	20.53	47.52
Refused	101	225	38.02	85.55
Stabbing & Beating	1	226	0.38	85.83
Missing	37	263	14.06	100.00

Forty-six percent of refugee respondents have had an eye exam in the past 12 months (Figure 11). Another 23% have had an annual exam from 13 to 60+ months ago. However, 23% of refugee respondents have never had their eyes examined while living in the US. Another 5% were unsure about whether or not they had been given an eye exam since resettlement in the United States and 2 percent did not wish to respond to this particular question.

Figure 11: Refugee Respondents that Have Ever Had an Annual Eye Exam

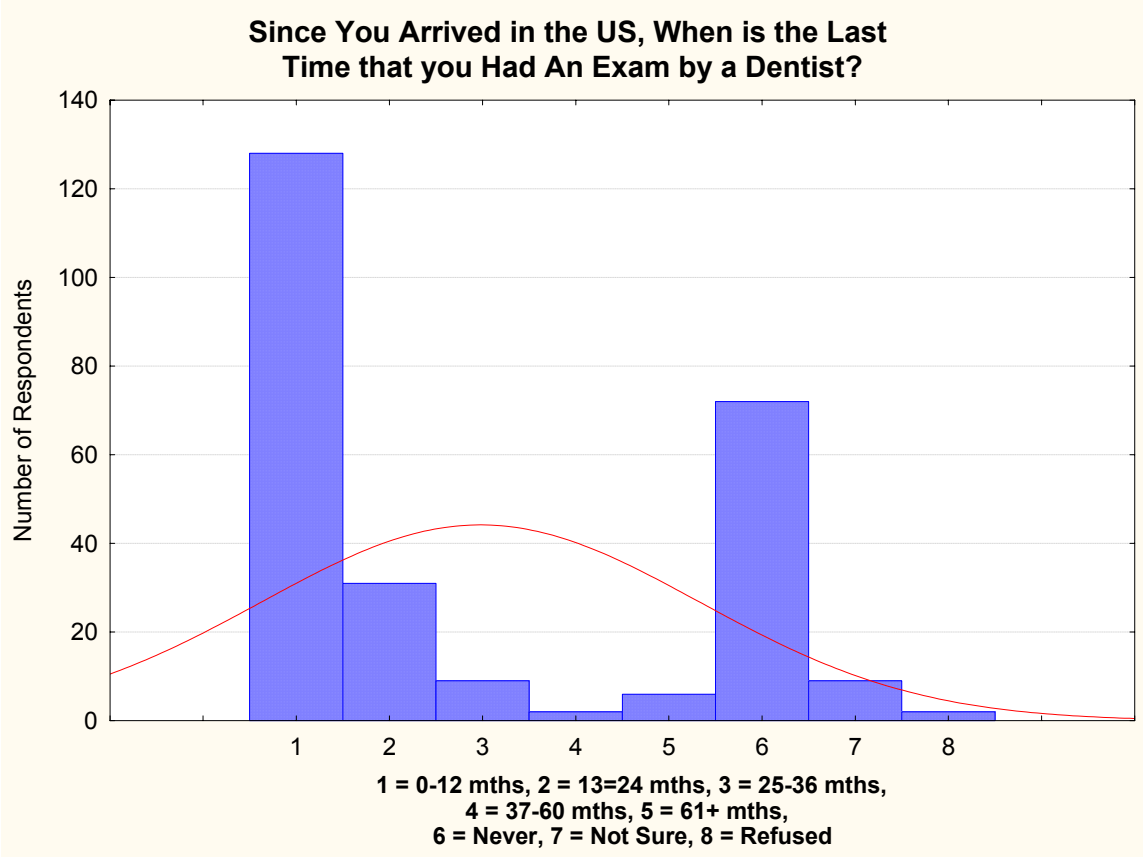


Of the 259 refugees that indicated whether they had ever visited a dentist after arrival in the US, 28% noted that they had never been to a dentist, no matter how long ago they had been settled in the US (Figure 12). Three percent of respondents were unsure when or if they had visited a dentist since arriving in the US while 1% of participants refused to respond to this question. Also, at least 79 of 263 respondents have lower teeth missing due to a traditional tribal practice of extracting permanent upper or lower teeth at the time of eruption.

The Dinka report six extracted lower teeth, the Nuer report from four to eight lower and/or upper teeth extracted, and the Maban note that two lower incisors were removed during traditional tribal practices in Sudan.

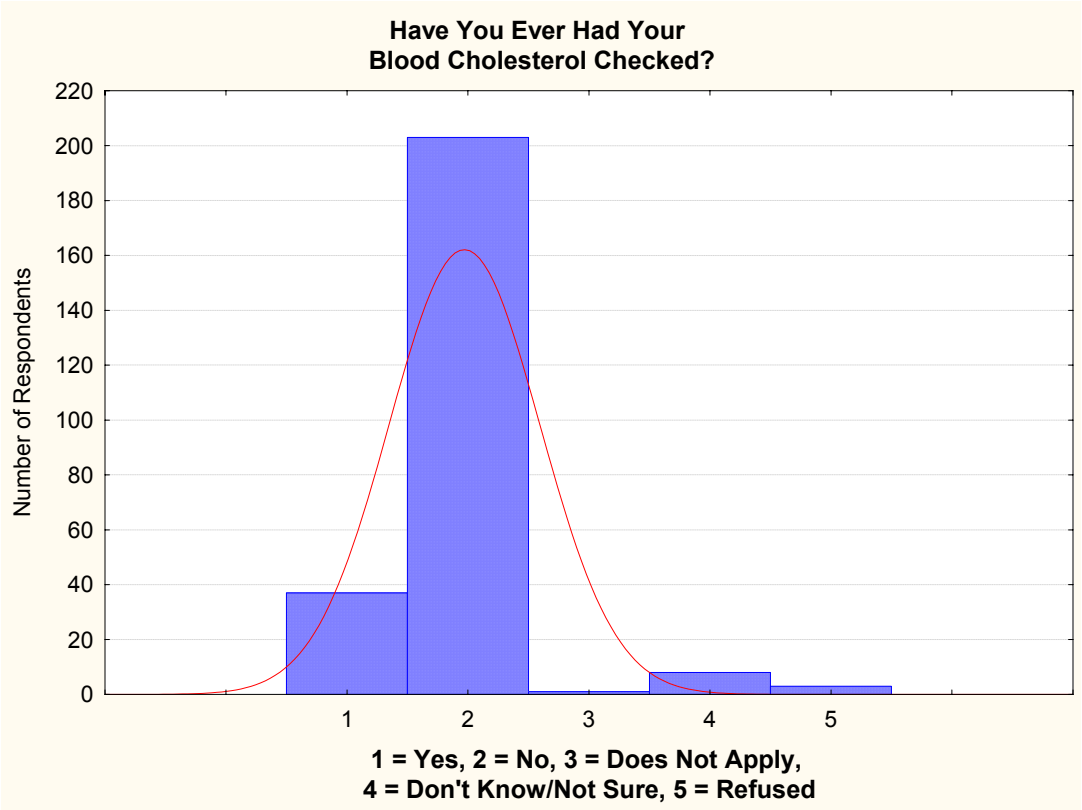
Forty-nine percent of refugees had visited a dentist in the last 12 months, while another 11% had been in the past two years, 3% in the last three years, 1% in the last four years, and 2% in the last five years. In sum, 67% had visited a dentist once in the last five years. Of the 100 out of 263 refugees that participated in the study and that were resettled in Nebraska, 19 or 19% had never visited a dentist while 73% had been to a dentist within the last 12 to 24 months.

Figure 12: Refugees that Have Ever Had an Annual Dental Exam



Although 34% of refugee respondents indicated that they knew what blood cholesterol was, 61% of the 261 respondents said that they did not have an understanding of cholesterol and levels within one's blood. Similarly, 77% of 225 respondents indicated that they had never had their blood cholesterol levels checked (Figure 13). Finally of the individual participants that have had their blood cholesterol checked, 19% of the 36 individuals that have been checked or 3% of the total number of participants, seven marked that they had been told by a doctor that their blood cholesterol levels are high.

Figure 13: Blood Cholesterol Screening Among Sudanese Refugees



Although 60% of respondents indicted that they knew what high blood pressure was (n = 258), 33% did not feel that they knew this condition. Of the 118 respondents that had been checked for the condition, 19% were told that they had high blood pressure, 80% were told that their blood pressure was in a normal range, and 1% marked 'not applicable', 'unsure' or 'refused' as to whether they had high or normal range blood pressure after a check. The majority of respondents that have been told their blood pressure is high are controlling this condition through dietary change. One to two percent of respondents manage their high blood pressure with medication or have not attempted to reduce their blood pressure at the present time.

Thirty five percent of the respondents did not know what diabetes was and just 10% of respondents noted that they had been told at some point in their lives that they had the condition. Of these, 9% had diabetes during pregnancy but not before or after this time. Similarly, 43% of respondents did not know what one would experience if they had arthritis. Eleven percent of respondents had experienced joint pain, aching, stiffness, and swelling during the past 12 months. Just 3% of participants (n = 10) had been told that they had asthma and at present, eight of these continue to be diagnosed as asthmatic. Four percent of respondents also noted that their children had been diagnosed with asthma as well.

Section Fifteen
Food and Nutrition

Only 20 or 8% of refugee respondents noted that they grow their own food in a garden within Lancaster County or the State of Nebraska. However, 79% of respondents (n = 182) felt sure that they would garden if they had access to space and materials. Another 6% were unsure, did not feel the question was applicable to them or did not respond to the question concerning the possibility of gardening. Fifty-eight percent of the Sudanese refugee respondents expressed concern about nutrition and whether or not they were eating the 'right' foods now that they are in the US. Another 39% indicated that they do not have concerns about nutrition and/or whether they are selecting the right proportions of food for a healthy diet. Thirty-five percent of the Sudanese refugee respondents marked that they did not know US foods and wish to have education in selecting and preparing American meals.

Sixty-four percent of the refugee respondents did not know where they could obtain free food, e.g., Commodities Supplemental Food Program, Women, Infants and Children, and Lincoln Action Program, in an emergency (Figure 14).

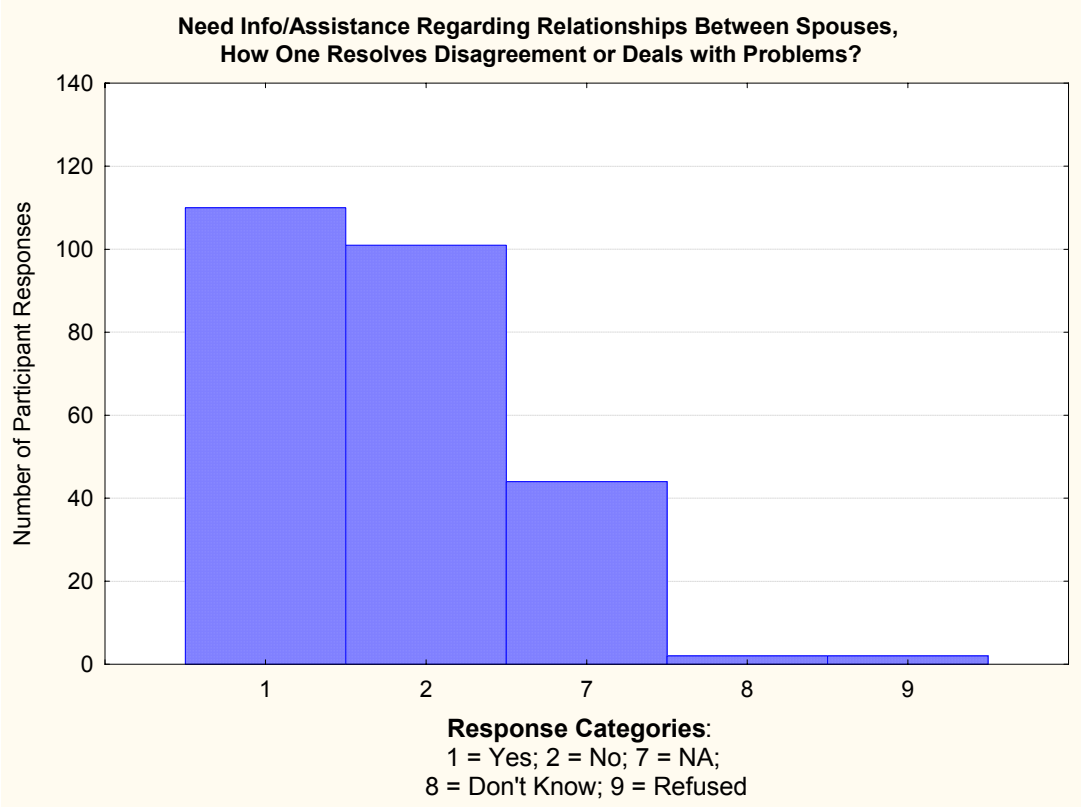
Figure 14: Knowledge of Emergency Food Supply Locations

Section Sixteen

Mental Health and Family Relationships

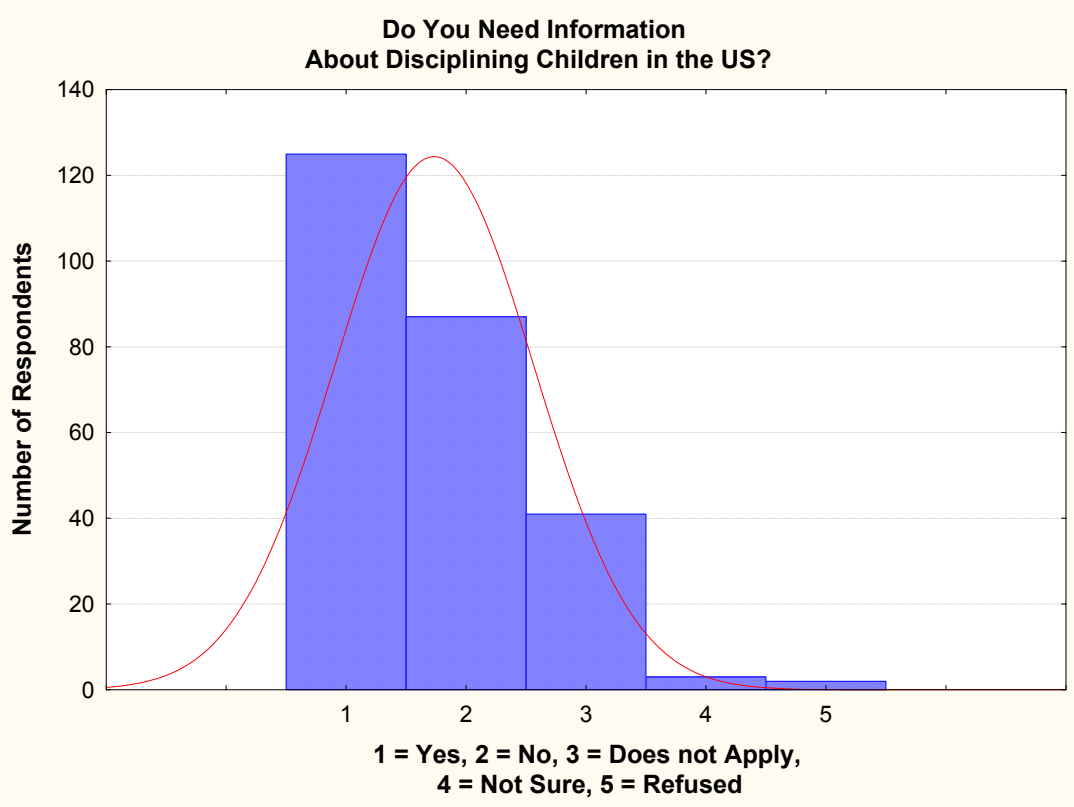
Although 13% of refugee respondents indicated that they knew where to go if they or their children were in need of mental health services, e.g. for treatment of sleeplessness, frequent anger, and/or continual bouts of crying, 75% of participants did not know an appropriate place to go in order to receive such assistance. Forty-three percent of the respondent population felt that they needed information or assistance regarding relationships and resolution of disagreement between spouses now that they are in the US (Figure 15). By contrast, 38% of respondents felt that such assistance was unnecessary.

Figure 15: Desire to Have US Domestic Relationship Training



Forty-nine percent of the respondents indicated that they have no idea how the US legal system regulates domestic issues and 3% were unsure of the legal implications regarding marriage and domestic interaction. In addition the information and services regarding spousal interaction, 48% of refugee participants felt that they needed information and assistance concerning methods for disciplining children in the US (Table 16) while 2% of refugees were unsure about needing such information.

Figure 16: Desire for Training on Discipline of Children in the US



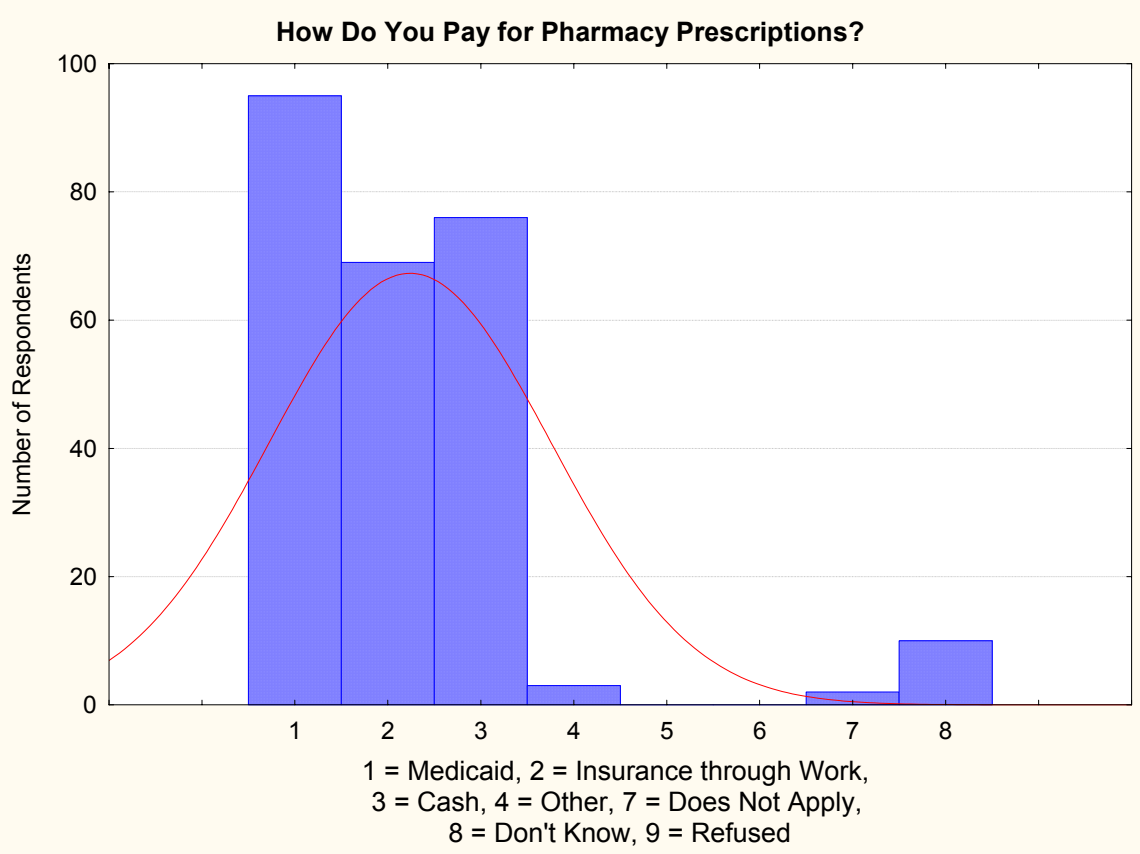
Section Seventeen
Health Care Coverage

Regarding health care coverage, 157 of 263 refugee respondents from Sudan indicated that they had some form of health insurance coverage, through work, federal programs such as Medicaid/Medicare, or prepaid, HMO type plans. Although eight participants did not indicate whether they had coverage, 98 individuals (37%) noted that they do not have any type of medical coverage at the present time.

As shown in Figure 17, the highest percentage of refugees pay for their prescriptions using 'Medicaid' while similar numbers of refugees pay for

prescriptions using 'Insurance through Work' (26%) and 'Cash' (28%). Other response options, covering the remaining 9% of respondents, included 'Other' (1%), 'Does not Apply' (Less than 1%), 'Don't Know/Not Sure' (4%), and 'Refused' (3%).

Figure 17: Payment Methods for Pharmacy Prescriptions



Thirty percent (n = 78) of the 264 Sudanese refugee respondents indicated that, within the past 12 months they had not gone to see a doctor, despite the fact that they needed to do so, because they could not cover the associated costs (Figure 18). Another 63% of respondents felt that cost had not

prevented a visit to the doctor that was needed, while the remaining 7% were either unsure or did not wish to indicate whether money had been a barrier to seeking needed medical care.

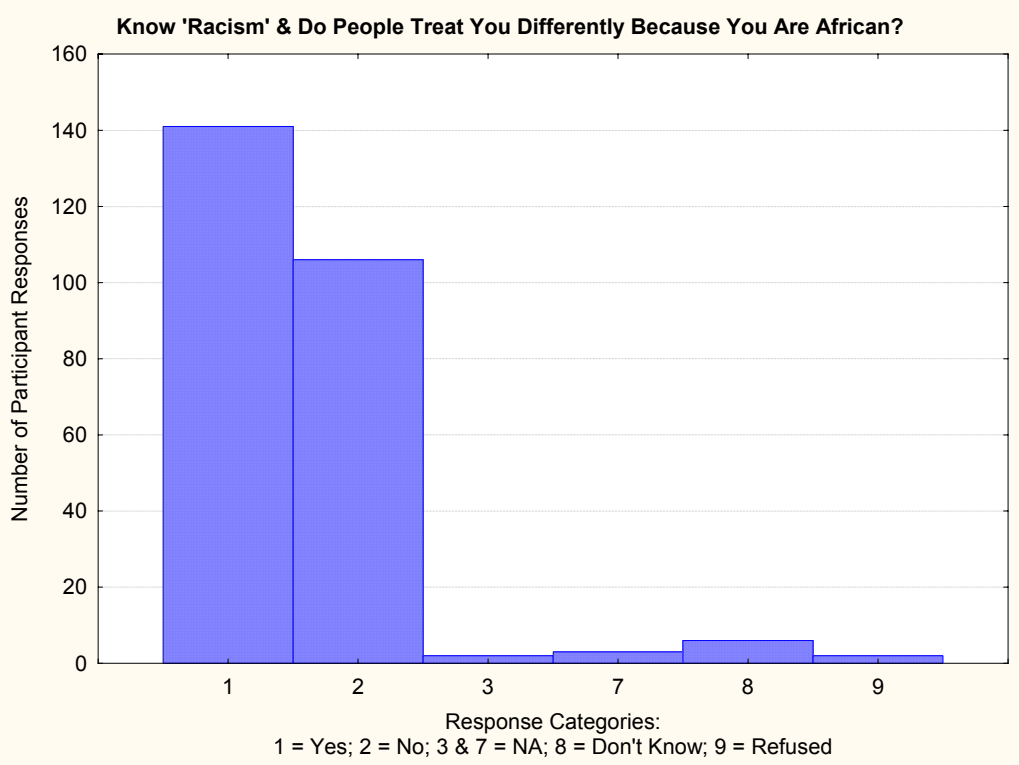
Figure 18: Refugees that Did Not Seek Medical Care Due to Cost

Section Eighteen
Barriers to Health Care

Fifty three percent (n = 141) of Sudanese refugee respondents felt that they had experienced racism during the time that they have lived in the State of Nebraska (Figure 19). Another 41% of refugees from Sudan marked that they had not experienced racism while living within the State. Six percent of

respondents were unsure if they had experienced racism, did not feel that the question applied to them or did not wish to answer.

Figure 19: Knowledge of Experience Racism by Refugees from Sudan



Of the 263 Sudanese refugees that participated in this survey, 21% noted that they 'Strongly agree' or 'Agree' that racism has been a barrier to obtaining health care services within the State of Nebraska. However, 56% of the refugee respondents either 'Disagree' or 'Strongly Disagree' that racial or ethnic origin currently is a barrier to receiving health care services within Lancaster County or the State of Nebraska.

Nine other barriers were identified as impacting health care and ranging in importance from 8% to 27% (Table 6). Not a single barrier was noted by

more than one third of the population as having a significant impact on their access to health care. Both the cost of health care and the time that one must wait to see the doctor with an appointment received the highest number of responses, 27% and 24% respectively, while the time it takes to obtain an appointment and language barriers received 19% and 18% of affirmative responses from participants respectively. All other barriers were noted as such by 15% or less of refugee respondents.

Table 6: Additional Barriers to Health Care

Barriers	Percentage
Cost	**27%**
Lack of Trust in Doctors	8%
Language	**18%**
Don't Know Where to Go for Health Care	15%
Transportation	12%
Site not Convenient	10%
Wait too Long at Office	**24%**
Lack of Cultural Understanding	11%
Too Long for Appointment	**19%**

Section Nineteen
Community Concerns

Of the total number of community concern options (n = 12) that refugees from Sudan could select as 'Very Critical' problems facing their community,

nine were described as such by 50% or more of the Sudanese refugee respondents. Community problems or areas of concern are listed in Table 7 below, in descending order and based upon how many refugees indicated that the particular issue was of concern among the Sudanese. In addition, all of the combined 'Very Critical' or 'Critical' selections in Table 7 totaled 75% or more of all Sudanese refugee respondents. Education received the highest number of affirmative responses, 81%, while employment (80%) and language training and 'at risk youth' were the next highest combined totals with 79% of refugee participants selecting each as critical or very critical. Health and issues related to discrimination were noted as 'very critical' or 'critical' to 48% of refugee respondents.

Table 7: Ratings of Importance for Community Problems by Refugees

COMMUNITY PROBLEMS	Very Critical	Critical	Total	Not Critical	Don't Know	Refused
Language Training	N = 174 **66%**	13%	79%	7%	8%	.4%
Education	N = 172 **65%**	16%	81%	9%	5%	4%
Childcare	N = 171 **65%**	13%	78%	3%	13%	6%
Employment	N = 169 **64%**	14%	80%	12%	5%	4.5%
Minority Representation in Government	N = 167 **63%**	15.5%	78.5%	8%	8%	5%
Housing	N = 156 **59%**	16%	75%	17%	4%	3%
Social/Recreational Activities	N = 156 **59%**	17%	76%	14%	5%	5%
At Risk Youth	N = 150 **57%**	19%	79%	12%	6%	4%
Transport	N = 136 **52%**	24%	76%	12%	6%	6%
Health	N = 126 48%	24%	72%	16%	7%	5%
Discrimination	N = 126 48%	24%	72%	18%	5%	4%
Crime	N = 90 34%	21%	55%	31%	8%	5%

One additional issue of concern to refugees relates to the cost of the airline tickets that each refugee must repay the International Organization of Migration (IOM) for their transport from Africa to the US. Although not all entered a response to the question concerning the cost of coming to the US, the average dollar amount owed to the IOM among 195 refugees was $1,590.00. Sixty-six percent still owe some portion of this ticket cost.

Section Twenty
Conclusions and Recommendations

This survey includes data from 263 refugees from Sudan that now live within Lancaster County (n = 228) and/or Douglas County (n = 35) in the State of Nebraska. Several of the refugee survey administrators encountered active resistance to participation within one ethnic community, the Nuer. It is unclear if this resistance was related to tribal and/or local politics or if individuals were afraid of providing information that they feared would identify them as individuals or might not benefit the refugee community. For this reason the data set cannot be described as random. We did attempt to include as many refugees from Sudan that were living within Lancaster County during the 2003 data collection period. We also believe that the observed patterns are generally representative of the Sudanese refugee community as a whole, including those residing in Douglas, Gage, Hall, Madison, Otoe, Platte, Sarpy, and Seward Counties. We use the term refugees because 92% of respondents indicated that this term best describes their status upon entering the US. All other respondents were categorized as immigrants or political asylees.

Population Diversity

Refugees from Africa, and more specifically refugees from Sudan, are relatively recent arrivals to the US. Most Sudanese refugees came to the US and/or to Nebraska during the year 2000. The population is diverse in terms of ethnicity and language, with at least 14 tribes of Sudan represented. Although more Dinka participated in this survey than did Nuer, the Nuer

population is actually the largest in number of all Sudanese refugees in the State. Nevertheless, the Dinka are the largest number of primary settlements to Nebraska and individuals and families of Dinka ancestry continue to be settled in both Lancaster and Douglas Counties.

> ***Recommendation #1***: *Educate local providers about refugee tribal diversity and ensure that individuals from at least the largest tribes, e.g., the Dinka, Nuba, and Nuer, participate in community planning and service provision. Selection of one tribe to represent all of the refugees from Sudan may not provide assistance for all. Moreover, subtribal diversity within the State may also mean that each individual selected to represent any tribe must be done with caution and consultation with refugee community leaders could circumvent future problems within the community.*

Language Requirements

There is no single language of Sudan that all refugees can speak, read, or write. Three languages are essential for interpreting and translating purposes in Lancaster County: Dinka, Nuer and Arabic. Many individuals are unable to read or write in their native languages. Also, Dinka and Nuer are distinct languages and are not mutually intelligible. The Dinka language includes several dialects and consequently, one may encounter difficulty in selecting a representative translator for written materials. This may be true for interpreters as well. Finally, the Arabic spoken by the refugees of Sudan is encompassed by multiple dialects and it should be clear that these are not interchangeable with the Arabic dialects spoken in the Middle East and/or other parts of Northern Africa (see Ethnologue, 2004).

> ***Recommendation #2***: *Encourage health entities serving the Sudanese refugee community to understand the language diversity that is linked to tribal identity. Each facility should ask refugees their first language and*

maintain a list of trained translators and interpreters for Dinka, Nuer, and Sudanese dialects of Arabic.

General Health Status

The Sudanese refugee population, regardless of tribal affiliation, is relatively young in age, i.e., less than 29. At present, males outnumber females by a 2 to 1 margin. Nevertheless, on average, refugees from Sudan are married and usually, a spouse has accompanied the refugee to the US. A few refugees are widowed or have been separated during the war from a marriage partner. Likewise, some refugee males were married to more than one female and had to leave the other spouse(s) and/or children behind in Sudan and/or in refugee camps. Dinka males in Lancaster County are more likely to be single and many arrived as *Lost Boys*, a population of young men separated from their families during childhood in Sudan but not reunited with parents prior to resettlement in the US.

Less than half of the refugees from Sudan that now live in Lancaster County were settled in Nebraska through a federal resettlement agency and, prior to 2004, most of these did not receive general health screening upon arrival. Unless they were school age and had a mandatory health exam, their health status related to many diseases, e.g., Hepatitis B and C and parasitic infections, remains unknown. Some respondents indicated that they felt that they currently have a condition related to infection while living in Africa that has not been treated. Nearly half of the respondents reported that they had

experienced some kind of physical trauma before coming to the US, but none had received any kind of treatment for these experiences and injuries.

Nearly 60% of the respondents in this survey have moved to Nebraska after being settled in one of 26 other US states. It is unclear what kinds of resettlement services the refugees were offered by the original resettlement site. Nebraskans can be affected by refugees that are subject to health resettlement policies of other states, in addition to that designed within Nebraska's own HHS system.

> ***Recommendation #3****: Do not assume that refugees have had health screening upon arrival in the US or that they are healthy. Encourage screening and develop methods for providing health education sessions to service providers so that they understand Africa's endemic or prevalent diseases and the need to provide treatment, e.g., Hepatitis B and C. Also, refugees need training concerning US preventive health systems and prevalent Western diseases – from hypertension to Type II diabetes.*

Language Training Needs

One third of all refugees from Sudan indicated that they had not yet taken English courses since arriving in the US. Just 19 of the 263 respondents use English in the home, regardless of skill level. More than half of the refugees have not yet earned a high school diploma and most of these have not been schooled beyond the eighth grade. The majority of those that have completed school to any level did so outside of the US but most often in Sudan. Education acquired in Africa may or may not be applicable to US educational systems and/or the job market.

> ***Recommendation #4****: Language courses are not mandatory during the resettlement process and resettlement agencies are only required to show refugees where classes are available. For most, the cost of long-term*

language courses necessary for proficiency is prohibitive. Promote literacy classes, preferably intensive-style immersion training, so that refugees can quickly acquire English for use in the job market and in the pursuit of high school equivalency programs and health education.

Refugees begin life in the US in debt as each owes the International Organization for Migration for his/her airline ticket to the US from Africa. Most refugees rent their home and household income does not exceed 25,000.00 per year. Many refugees report that they are sending money to Africa to support children and/or family members that are not currently in the US. Limited expendable income prevents a small number of refugees from purchasing auto insurance and renter's/homeowner's insurance. Five percent of respondents do not purchase child safety seats because of the associated cost.

Although the data is self-report in nature, it appears that few refugees smoke cigarettes and/or drink alcohol. Men are more likely to engage in these behaviors than women. Regarding women's health issues, almost half of the female respondents had never had a clinical breast exam or a pap smear. Refugees from Sudan do not seem to have a clear understanding of the difference between HIV and AIDS and 20% or more of the respondents had misconceptions about one or more transmission routes. Most refugees had never had their blood cholesterol checked, half did not know what high blood pressure was, and nearly 35% of respondents did not know conditions such as diabetes and/or arthritis. Almost one third of the refugee respondents have never had their eyes examined while another third have not had exams for one to three years. Similar results were obtained for refugees regarding dental

exams and visits. More than half of the refugee respondents indicated they would like to learn about nutrition and US dietary recommendations. Moreover, because refugees are at risk for developing osteoporosis – due to either malnutrition prior to arrival in the US and/or lack of sunlight and Vitamin D synthesis – nutrition training should cover vitamin supplements. Several of the tribes from Sudan have the darkest skin in the world, e.g. the Nuer and the Dinka, and the Nebraska climate provides little sunlight during the winter months, therefore information regarding Vitamin supplements should be incorporated into any nutrition-related training. Lastly, over 40% of respondents wished to be taught the US methods for resolving domestic disputes and the legal guidelines for domestic interaction.

> ***Recommendation #5****: Design preventive health education programs for refugees and immigrants arriving from countries where infectious diseases, rather than preventive ones, are the norm. Include nutrition and micronutrient training (including Vitamin D supplements). Assist refugees in accessing free or reduced cost services for both eye and dental care coupled with related preventive education systems. Provide information on US domestic relationships and methods for resolving domestic disputes.*

None of the listed barriers to health care received a response rate from refugee participants exceeding 30%. Those receiving the highest rates as barriers to health care, cost and the long wait to receive an appointment, may be addressed by the opening of the *Peoples Health Center* in Lancaster County in September of 2003. The Center is federally funded to accommodate community members without health insurance options and/or that have Medicaid but cannot find a provider willing to assist with this option.

When asked about concerns from the Sudanese refugee community perspective and allowing refugees to list the response options themselves, refugees cited education, employment, and language and 'at risk youth' as the most important community needs.

> ***Recommendation #6****: Encourage policy makers to address transportation needs of refugees, as well as language training and health screening, given the impact on education and employment, issues outlined as the most critical to the refugees. These issues must be addressed for new arrivals but should also be considered for those that have been in the US longer but were not given assistance. Organize educational sessions for city and state legislators, police departments, and legal systems regarding the refugee population and diversity of cultures. Include refugee participation as a first step toward government participation and work with community agencies to design targeted programs for at-risk youth.*

Concluding Remarks

Health education and targeted care are urgently needed within the Sudanese refugee community to prevent individuals and families in already precarious living conditions from experiencing an even greater disease burden and/or a health outcome that is no longer reversible. We hope to continue this survey assessment of the Sudanese refugee community in other Nebraska cities where refugees are currently residing, e.g., Omaha, Grand Island, Columbus, with funding from Nebraska's Health and Human Services. However, should additional sampling be impossible, the needs of the diverse Sudanese refugee community in Lancaster County provide examples of clearly defined priorities and concerns. Although many of these issues, from language training to health screening, should have been addressed at the federal level,

recent arrivals are forced to work toward high health status and moderate English language skill with few resources.

Some of the issues highlighted in this report will require policy change at the federal level. For example, the fact that each state can determine whether refugees coming from the same country of origin will receive health screening and treatment for communicable diseases means that a refugee may or may not get treated for particular disease entity. An untreated refugee can then travel within the US and inadvertently "move" that infectious disease from one resettlement site to another. Screening and treatment at arrival would have prevented additional infections and limited additional suffering by the refugees.

Sudanese refugees have indicated a desire to become educated, understand and engage in US health practices and legal customs, and adhere to local guidelines. Yet they often lack the resources and knowledge to allow such choices to be made. We hope this report will enhance an understanding of Sudanese refugee needs, particularly as new arrivals strive to become healthy, contributing citizens within Lancaster County.

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