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*Gulf States Community Research Fellows
Birmingham, AL
Spring 2017
Evaluation Report*

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at Gulf States Health Policy Center, BayouClinic, Inc.*



Gulf States
Health Policy Center
Community Research Fellows

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Spring 2017*

Report Introduction

The Gulf States Community Research Program (GSCR) program took place in Birmingham between January 10th, 2017 and May 16th, 2017. This report reflects the implementation and evaluation of a community based participatory training (CBPR) program for this cohort of community members. The report provides data on the assessment of the program's effectiveness in promoting the role of underserved populations in research by enhancing the capacity for CBPR. In assessing the social network development of the cohort, we seek to understand effectiveness in bridging many community roles to serve the purpose of addressing health disparities. Specifically, the report assesses if the Birmingham GSCR program has met its specific aim: To enhance community knowledge and understanding of research.

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I. Baseline Assessment

Introduction

The Gulf States Community Research Program (GSCR) Program baseline assessment survey was completed by program fellows (n=29) prior to the beginning of the Community Research Program Courses. All baseline assessments were completed prior to January 10, 2017. The purpose of the baseline assessment questionnaire was to evaluate the fellows' understanding of key research concepts to be addressed throughout the program course in weekly modules. Many of the questions will be repeated in a post-GSCR assessment after the 16-week program to assess growth. The post assessment results will be provided in Section IV of this report.

Demographic Characteristics

As provided in Table 1, the majority of the Birmingham GSCR cohort were female (n=23, 79.3%) and African American (n=22, 75.9%). The remaining fellows reported their race as Caucasian (n=4, 13.8%) or Asian/Pacific Islander (n=2, 6.9%) and one fellow reported both Caucasian and Asian/Pacific Islander (3.4%). All but one fellow identified as Non-Hispanic (n=28, 96.6%). All 29 fellows were born in the United States. Most fellows lived in Birmingham, AL (n=20, 69.0%) (see Figure 1), with the other cities of residence listed as Hoover, AL (n=3, 10.3%), Alabaster, AL (n=2, 6.9%), Huntsville, AL (n=1, 3.4%), Tuscaloosa, AL (n=1, 3.4%), Pinson, AL (n=1, 3.4%) and Gardendale, AL (n=1, 3.4%). Fellows were between 22 and 66 years of age (Mean 36.8 years, SD 13.7 years). All fellows had attended college, with approximately 41.4% receiving a college degree (n=12) and the same number reporting a completed graduate degree (n=12, 41.4%). The fellows' experience with regard to research classes varied, with over half (n=16, 55.2%) having never taken a research class prior to their participation in GSCR. 11 respondents reported that they had taken 1-2 research classes (37.9%), and two had taken 3-4 research classes (6.9%). The majority of the cohort worked full

time (n=18, 62.1%), nine fellows (31.0%) worked part time, and two fellows (6.9%) were not employed at the time. Additionally, 41.4% (n=12) of fellows were students, one was retired, and none were disabled.

Figure 1: Map of Fellows' Zip Codes

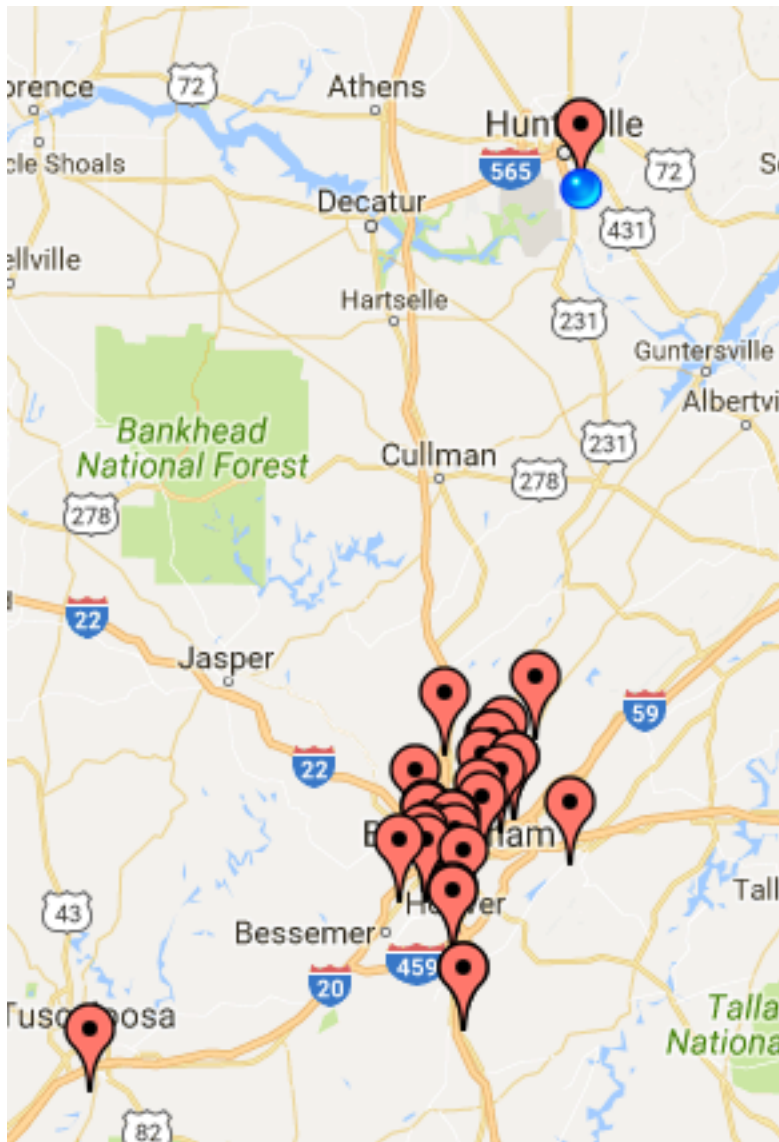


Table 1: Demographic Characteristics of Birmingham GSCRFP Fellows (n=29)

Characteristics	n (%)	N (%)
Gender		
Female	23 (79.3)	23 (79.3)
Race		
African American	22 (75.9)	22 (75.9)
White	4 (13.8)	4 (13.8)

Asian/Pacific Islander	2 (6.9)	2 (6.9)
White and Asian/Pacific Islander	1 (3.4)	1 (3.4)
Ethnicity		
Non-Hispanic	28 (96.6)	28 (96.6)
Country of Origin		
United States	29 (100.0)	29 (100.0)
City of Residence		
Birmingham	20 (69.0)	20 (69.0)
Hoover	3 (10.3)	3 (10.3)
Alabaster	2 (6.9)	2 (6.9)
Huntsville	1 (3.4)	1 (3.4)
Tuscaloosa	1 (3.4)	1 (3.4)
Pinson	1 (3.4)	1 (3.4)
Gardendale	1 (3.4)	1 (3.4)
Highest level of Education		
Some college or Associates Degree	5 (17.2)	5 (17.2)
College degree	12 (41.4)	12 (41.4)
Graduate degree	12 (41.4)	12 (41.4)
Number of Research Classes Completed		
5 or more	0	0
3-4	2 (6.9)	2 (6.9)
1-2	11 (37.9)	11 (37.9)
None	16 (55.2)	16 (55.2)
Current Employment Status		
Full time	18 (62.1)	18 (62.1)
Part time	9 (31.0)	9 (31.0)
Unemployed	2 (6.9)	2 (6.9)

Fellows were asked to define key terms and concepts that were considered essential components to understanding the Birmingham GSCRП learning objectives (see syllabus in Appendix A). The data were coded without reference to any identifiers to the respondent. The frequencies of the coded responses are provided in Table 1¹.

Table 2: Knowledge of Key Terms and Concepts (n=27)²

¹ Responses were coded as 0, 1, 2, or 3. When the respondent reported that they did not know the answer and did not provide an answer, it was coded as “0.” When the respondent provided an answer, but it was incorrect, it was coded as “1” When the respondent provided an answer that contained two or three key words and the response indicated that the respondent was somewhat familiar with the concept or definition, it was coded as “2.” Finally, when the response demonstrated a clear understanding of the concept or definition, it was coded as “3.”

Question	0: I don't know n (%)	1: Incorrect Answer n (%)	2: Somewhat familiar n (%)	3: Demonstrates Clear Understanding n (%)
What is informed consent?	2 (6.9)	3 (10.3)	8 (27.6)	16 (55.2)
What is the Belmont	20 (69.0)	0	3 (10.3)	6 (20.7)
What is the Tuskegee experiment?	1 (3.4)	0	4 (13.8)	24 (82.8)
Define Health Literacy.	5 (17.2)	4 (13.8)	4 (13.8)	16 (55.2)
Define evidence based public health.	10 (34.5)	1 (3.4)	2 (6.9)	16 (55.2)
Define cultural	8 (27.6)	6 (20.7)	7 (24.1)	8 (27.6)
What role does the IRB play in research?	11 (37.9)	1 (3.4)	8 (27.6)	9 (31.0)
What is HIPAA?	2 (6.9)	2 (6.9)	7 (24.1)	18 (62.1)
Explain the difference between qualitative and quantitative research methods.	8 (27.6)	1 (3.4)	2 (6.9)	18 (62.1)
What is the difference between primary and secondary data?	16 (55.2)	2 (6.9)	0	11 (37.9)
Explain the difference between Community Based Participatory Research and Traditional Research.	14 (48.3)	1 (3.4)	0	14 (48.3)
What is epidemiology?	3 (10.3)	3 (10.3)	4 (13.8)	19 (65.5)
What is a clinical trial?	7 (24.1)	3 (10.3)	3 (10.3)	16 (55.2)
What is the mixed methods approach?	22 (75.9)	0	0	7 (24.1)
What is photovoice?	22 (75.9)	3 (10.3)	0	4 (13.8)
What is the purpose of a focus group?	8 (27.6)	3 (10.3)	3 (10.3)	15 (51.7)
What is a family health history?	1 (3.4)	1 (3.4)	0	27 (93.1)
What type of information should you expect to get from a community health assessment?	12 (41.4)	1 (3.4)	9 (31.0)	7 (24.1)
Describe one health promotion planning model?	22 (75.9)	0	3 (10.3)	4 (13.8)

What are the social determinants of health?	6 (20.7)	0	0	23 (79.3)
List three social determinants of health?	6 (20.7)	1 (3.4)	2 (6.9)	20 (69.0)
What is research?	4 (13.8)	0	3 (10.3)	22 (75.9)
Define racial health disparities.	4 (13.8)	0	0	25 (86.2)
What are the components of a SMART goal?	18 (62.1)	0	1 (3.4)	10 (34.5)
What is the Odds Ratio?	21 (72.4)	0	0	8 (27.6)
What is a p value?	16 (55.2)	0	1 (3.4)	12 (41.4)
List an effective method to advocate for a specific health issue in your	14 (48.3)	0	0	15 (51.7)
How is research used to develop health policy?	14 (48.3)	0	1 (3.4)	14 (48.3)

Fellows were also asked to rate their agreement with twelve statements regarding perceptions of research (Table 3), their level of agreement with statements related to the role of the community (Table 4), and how involved the community should be in the research process (Table 5). Fellows were then asked questions designed to gain insight into their knowledge of genetics in health (Table 6). Finally, Table 7 provides the frequency of responses regarding the need for assistance with completing medical forms.

Table 3: Perceptions of Research (n=29)

Question	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)	Mean
a. To get people to take part in a study, medical researchers usually do not explain all the dangers about participation.	10 (34.5)	11 (37.9)	4 (13.8)	3 (10.3)	1 (3.4)	2.1
b. Participants should be concerned about being deceived or misled by medical researchers.	6 (20.7)	8 (27.6)	4 (13.8)	8 (27.6)	3 (10.3)	2.8
c. Usually, researchers who make mistakes try to cover them up.	5 (17.2)	12 (41.4)	10 (34.5)	1 (3.4)	1 (3.4)	2.3
d. Medical researchers act differently toward minority participants than white participants.	2 (6.9)	3 (10.3)	13 (44.8)	10 (34.5)	1 (3.4)	3.2

e. Medical researchers unfairly select minorities for their most dangerous studies.	5 (17.2)	10 (34.5)	10 (34.5)	4 (13.8)	0	2.4
f. Some medical research projects are covertly designed to expose minority group diseases like AIDS.	12 (41.4)	7 (24.1)	9 (31.0)	0	1 (3.4)	2.0
g. Medical researchers are generally honest in telling participants about different treatment options available for their conditions.	1 (3.4)	6 (20.7)	5 (17.2)	12 (41.4)	5 (17.2)	3.5
h. Usually, medical researchers tell participants everything about possible dangers.	2 (6.9)	5 (17.2)	9 (31.0)	9 (31.0)	4 (13.8)	3.3
i. All in all, medical researchers would not conduct experiments on people without their knowledge.	1 (3.4)	6 (20.7)	4 (13.8)	10 (34.5)	8 (27.6)	3.6
j. Most medical researchers would not lie to people to try and convince them to participate in a research study. 2 (7.4)	0	2 (6.9)	7 (24.1)	15 (51.7)	5 (17.2)	3.8
k. In general, medical researchers care more about doing their research than about the participants' medical needs.	4 (13.8)	7 (24.1)	10 (34.5)	8 (27.6)	0	2.8
l. Researchers are more interested in helping their careers than in learning about health and disease.	9 (31.0)	7 (24.1)	10 (34.5)	3 (10.3)	0	2.2

Table 4: Community Influence (n=27)

Question	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)	Mean
a. By working together, people in my community can influence decisions that affect the community.	0	0	1 (3.4)	10 (34.5)	18 (62.1)	4.6
b. People in my community work together to influence decisions at a local, state, or national level that affect the community.	1 (3.4)	8 (27.6)	8 (27.6)	6 (20.7)	6 (20.7)	3.1
c. I am satisfied with the amount of influence that I have on decisions that affect my community.	3 (10.3)	14 (48.3)	8 (27.6)	4 (13.8)	0	2.4

Table 5: Perception of Community's Role in Research (n=27)

Question	Not at all involved (0)	A little bit involved (1)	Somewhat involved (2)	Quite a bit involved (3)	Extremely involved (4)	Mean
a. Defining the problem.	0	0	13.8%	34.5%	51.7%	3.4
b. Deciding on issues of research.	0	6.9%	24.1%	41.4%	27.6%	3.0

c. Developing research questions.	3.4%	20.7%	34.5%	27.6%	13.8%	2.3
d. Designing interviews and/or survey questions.	6.9%	31.0%	20.7%	31.0%	10.3%	2.1
e. Collecting data.	20.7%	10.3%	34.5%	24.1%	10.3%	1.9
f. Recruiting study participants.	6.9%	6.9%	24.1%	34.5%	27.6%	2.8
g. Analyzing collected data.	20.7%	31.0%	20.7%	24.1%	3.4%	1.6
h. Disseminating and sharing findings.	6.9%	6.9%	31.0%	27.6%	27.6%	2.6
i. Grant proposal writing.	10.3%	17.2%	34.5%	24.1%	13.8%	2.1
j. Choosing research methods.	20.7%	31.0%	24.1%	20.7%	3.4%	1.6
k. Developing sampling procedures.	27.6%	27.6%	24.1%	17.2%	3.4%	1.4
l. Implementing the intervention.	6.9%	10.3%	17.2%	34.5%	31.0%	2.7
m. Collecting primary data.	10.3%	41.4%	17.2%	20.7%	10.3%	1.8
n. Interpreting study findings.	27.6%	24.1%	20.7%	24.1%	3.4%	1.5
o. Writing reports and journal articles.	27.6%	27.6%	24.1%	17.2%	3.4%	1.4
p. Giving presentations at meetings and conferences.	6.9%	20.7%	24.1%	34.5%	13.8%	2.3

Table 6: Knowledge of Genetic Health

Question	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)	Mean
a. I know how to assess the role of genes for health.	24.1%	24.1%	37.9%	13.8%	0	2.4
b. I know how to assess my genetic risk for disease.	20.7%	27.6%	27.6%	20.7%	3.4%	2.6
c. I can explain genetic issues to people.	17.2%	31.0%	27.6%	24.1%	0%	2.6

Table 7: Frequency of Need for Assistance with Medical Documents (n=27)

Question	Always (4)	Often (3)	Sometimes (2)	Rarely (1)	Never (0)	Mean
a. How often do you have someone like a family member, friend, hospital/clinic worker, or caregiver help you read hospital materials?	0%	0%	3.4%	27.6%	69.0%	0.3
b. How often do you have problems learning about your medical condition because of difficulty understanding written information?	0%	3.4%	10.3%	37.9%	48.3%	0.7

Health Information

Fellows were then asked how frequently they found health information through various sources, such as magazines and newspapers, television, and the Internet (Table 8). Fellows were also asked to rate how frequently they talked to friends and family members about health. Some fellows indicated that they “Always” talked to friends and family members about health (n=7, 24.1%), but the majority of fellows (n=15, 51.7%) reported “Often.” Additionally, six fellows (20.7%) reported “Sometimes,” and one reported “Rarely” (3.4%).

Table 8: Frequency of Sources for Health Information (n=27)

Question	Everyday (6)	Several days per week (5)	2-3 times per month (4)	About once per month (3)	5-10 times per year (2)	Less than 5 times per year (1)	Not in the last year (0)	Mean
a. Some newspapers or general magazines publish a special section that focuses on health. In the past 12 months, about how often have you read such health sections?	0%	17.2%	24.1%	27.6%	0%	17.2%	13.8%	2.8
b. Some local television news programs include special segments of their newscast that focus on health issues. In the past 12 months, how often have you watched health segments on local news?	3.4%	10.3%	31.0%	24.1%	6.9%	20.7%	3.4%	3.0
c. Some people notice information about health on the internet, even when they are not trying to find out about a health concern they have or someone in the family has. About how often have you read this sort of health information in the past 12 months?	13.8%	20.7%	20.7%	24.1%	10.3%	6.9%	3.4%	3.7
d. In the past thirty days, how often would you say	20.7%	31.0%	41.4%	6.9%	- ³	-	-	4.7

³ For the last question (In the past 30 days, how often would you say that you have looked for information about ways to stay healthy or to feel better?), three of the question options were not provided since the responses were not applicable due to the time frame asked in the question (30 days).

that you have looked for information about ways to stay healthy or to feel better?								
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Calculation Skills Self-Assessment

Finally, fellows rated their ease of number use. The mean and standard deviations for these statements are provided in Table 9.

Table 9: Ease of Number Usage (n=27)

Answer	Scale 0-6	Average value	Standard Deviation
a. How good are you at working fractions?	Not at all good— Extremely good	4.28	1.44
b. How good are you at working percentages?	Not at all good— Extremely good	4.52	1.53
c. How good are you at calculating a 15% tip?	Not at all good— Extremely good	5.24	0.91
d. How good are you at figuring out how much a shirt will cost if it is 25% off?	Not at all good— Extremely good	5.59	0.68
e. When reading the newspaper, how helpful are tables and graphs that are part of a story?	Not at all helpful— Extremely helpful	4.28	1.22
f. When people tell you that there is a chance of something happening, do you prefer they use words (e.g. it rarely happens) or numbers (e.g. there's a 1% chance)?	Always prefer words—Always prefer numbers	4.17	1.07
g. When you hear the weather forecast, do you prefer predictions using percentages (e.g. there is a 20% chance of rain today) or predictions using words only (e.g. there is a small chance of rain today)?	Always prefer percentages—Always prefer words	2.07	1.81
h. How often do you find numerical information to be useful?	Never—Very often	4.80	0.98

II. Baseline Social Network Analysis

The GSCRP Social Network Analysis Survey was also conducted with 27 Birmingham GSCRP fellows prior to the first meeting of the cohort. This was important for ensuring that that network connections reflected in the baseline social network data were not influenced by the GSCRP program. The social network survey will be repeated at the end of the program to assess: 1) the network that has formed as a result of the program, 2) how empowered individuals feel to improve the health of their community, and 3) if there is a relationship between network position and individual characteristics. This section presents the baseline data and Section V will provide the results for the end of the course and assess the three aforementioned objectives.

GSCRP fellows were asked about their potential contributions to improving community health. When asked to check all that apply, the majority of fellows feel they can contribute through connections to communities that are experiencing health disparities (70.4%), leadership (70.4%), and community connections (66.7%). When asked to indicate their single most important contribution, “connections to communities that are experiencing health disparities” was the most selected (37.0%). These responses indicate that fellows recognize the importance of social networks, both between those seeking to improve communities and these individuals’ connections to the communities they seek to improve.

The fellows were provided with a list of potential GSCRP outcomes and asked to indicate all outcomes that they consider critical to improving community health. All items were selected by a majority of fellows, with public awareness (100.0%), reduction of health disparities (88.9%), and creating healthier environments (88.9%) being selected the most. When asked to select the main reason they participate in GSCRP, creating healthier environments (37.0%), and reduction of health disparities (22.2%), were the dominant answers.

Table 10: Contribution to Improving Community Health (n=27)

Response:	Please indicate what you can potentially contribute to improving community health. (Choose all that apply).	What is your single most important contribution to improving community health? (Select one).
Data resources, including data sets, collection and analysis	10 (37.0%)	1 (3.7%)
Providing objectives to my organization	9 (33.3%)	1 (3.7%)
Specific health expertise	10 (37.0%)	2 (7.4%)
Expertise other than in health	10 (37.0%)	1 (3.7%)
Community connections	18 (66.7%)	3 (11.1%)
Connection to communities that are experiencing health disparities	19 (70.4%)	10 (37.0%)
Facilitation	11 (40.7%)	1 (3.7%)
Leadership	19 (70.4%)	2 (7.4%)
Broad activity for community health priorities	8 (29.6%)	5 (18.5%)
Other (please specify)	4 (14.8%)	1 (3.7%)

Table 11: Reasons for Participating in GSCR (n=27)

Response:	Which of the following GSCR results are critical to community health improvement? (Choose all that apply.)	Which of the following is the main reason you participate in GSCR? (Select one.)
Improving resource knowledge	22 (81.5%)	1 (3.7%)
Increased knowledge sharing	20 (74.1%)	3 (11.1%)
Coordinated communication	20 (74.1%)	0
Networking with individuals that do similar things	15 (55.6%)	0
Networking with individuals that do different things	18 (66.7%)	0
Data and information available through the program	17 (63.0%)	1 (3.7%)
Coordinated health assessment	18 (66.7%)	0
Increased access to services	22 (81.5%)	1 (3.7%)
Improved health outcomes	22 (81.5%)	2 (7.4%)
Reduction of health disparities	24 (88.9%)	6 (22.2%)
Public awareness	27 (100.0%)	0
Creating healthier environments (e.g., schools, worksites, community)	24 (88.9%)	10 (37.0%)
Policy, law, and/or regulation	21 (77.8%)	3 (11.1%)

Fellows indicated that, to date, they have on average only been somewhat successful (44.4%) in improving community health. However, in the next year, they feel on average that

they will be very successful (40.7%) in impacting the health of their community. When asked which aspect of GSCRП the fellows believe will help them achieve these goals, nearly all items were selected by a majority of fellows (>50%) with the exception of meeting regularly (48.1%). Emerging as the most important skills for making an impact in community health were exchanging information/knowledge (100.0%), and relationships created (85.2%).

Table 12: Success in Community Health Impact (n=27)

Response:	To date, how successful have you been at impacting health in the community?	In the next year, how successful do you feel you will be at impacting health in the community?
Very Successful	0	11 (40.7%)
Successful	6 (22.2%)	9 (33.3%)
Somewhat Successful	12 (44.4%)	6 (22.2%)
Not sure	5 (18.5%)	1 (3.7%)
Not Successful	4 (14.8%)	0

Table 13: GSCRП Skills for Improving Community Health (n=26)

Response:	What aspects of GSCRП do you think will help you achieve these goals? (Choose all that apply)
Brining together diverse individuals	21 (77.8%)
Meeting regularly	13 (48.1%)
Exchanging information/knowledge	27 (100.0%)
Relationships created	23 (85.2%)
Grant writing skills	22 (81.5%)
Research skills	20 (74.1%)
Having a shared vision and goals	21 (77.8%)
Collective synergy	18 (66.7%)
Research partnerships	22 (81.5%)

Prior to the beginning of GSCRП, the network cohesion metrics reflect macro-characteristics of the GSCRП network as one that is quite unconnected network (see Table 14 and Figure 2). All individuals were in someway connected to the network. That means all 27 fellows either knew another fellow or were known by another fellow prior to GSCRП. The data provides that the average fellow is connected 2.1 other fellows. Only 8.1% of the possible connections among fellows exist which indicates that there is a low overall level of connection in the network. The diameter of the network (the largest geodesic distance within the connected

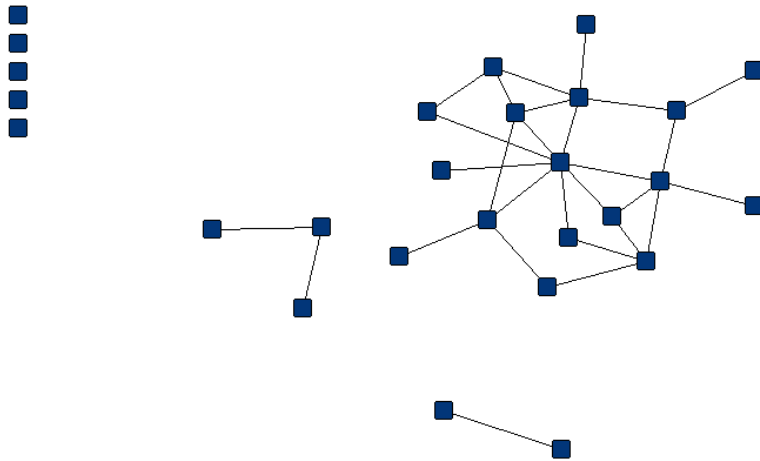
network) is six. This indicates that no fellows are more than six steps away from another fellow in the connected network (which excludes the one fellow who is not connected). The average distance of the baseline GSCRП network is 2.5, meaning on average it would take fellows 2.5 steps to reach all other fellows. These measures will provide meaning to the ability of the program to foster collaboration when they are re-assessed at the end of the program.

Table 14: Social Network Measures of Cohesion (n=26)

Network Measure	Statistic
Average Degree	1.519
H-Index	3
Density	0.058
Components	12
Component Ratio	0.423
Connectedness	0.329
Fragmentation	0.671
Closure	0.171
Average Distance	2.974
SD Distance	1.497
Diameter	8
Breadth	0.850
Compactness	0.150

Figure 2: Baseline GSCRП Sociogram (n=26)⁴

⁴ In Figure 2, each of the blue squares represents a Birmingham GSCRП fellow and the lines between the blue squares indicate relationships existing at the time of the survey. The numbers associated with the lines indicate the strength of the relationship where “5” is a strong working relationship and “1” indicates the fellow only knows the other by name. The arrows are bi-directional to demonstrate the direction of the relationship. If both individuals indicate a reciprocal relationship, then the line will have arrowheads at both ends.



III. Final Assessment

The Birmingham GSCRП final assessment survey was completed by community research fellows (n=22) after the final class of the Community Research Training course. All final assessments were completed between May 2, 2017 and June 2, 2017. The final assessment questionnaire paralleled the preliminary assessment evaluating Birmingham GSCRП fellows' understanding of key research concepts that were assessed throughout the training course in weekly modules.

Defining Key Terms and Concepts

The first section of the survey assessed key terms and concepts that were considered essential components to understanding research items, and were covered during the training courses. Fellows were first asked to define the key terms. The answers were coded without reference to the identity of respondent. Frequencies of the codes for each section are provided in Table 15. Table 16 provides the frequencies for responses regarding the fellow's level of knowledge regarding the role of genetics in health.

Table 15: Evaluation of fellows' knowledge of key terms and concepts (n=22)

Question	0: I don't know n (%)	1: Incorrect Answer n (%)	2: Somewhat familiar n (%)	3: Demonstrates Clear Understanding n (%)
What is Informed Consent?	0	1 (4.5%)	5 (22.7%)	16 (72.7%)
What is the Belmont Report?	2 (9.1%)	0	1 (4.5%)	19 (86.4%)
What is the Tuskegee experiment?	0	0	0	22 (100%)
Define Health Literacy.	0	0	3 (13.6%)	19 (86.4%)
Define evidence-based public health.	2 (9.1%)	0	2 (9.1%)	18 (81.8%)
Define Cultural Competency.	1 (4.5%)	0	7 (31.8%)	14 (63.6%)
What role does the IRB play in research?	2 (9.1%)	1 (4.5%)	2 (9.1%)	17 (77.3%)
What is HIPPA?	2 (9.1%)	0	0	20 (90.9%)
Explain the difference between qualitative and quantitative research methods.	1 (4.5%)	1 (4.5%)	7 (31.8%)	13 (59.1%)
What is the difference between primary and secondary data?	2 (9.1%)	2 (9.1%)	1 (4.5%)	17 (77.3%)
Explain the difference between Community Based Participatory Research and Traditional Research.	3 (13.6%)	1 (4.5%)	0	18 (81.8%)
What is epidemiology?	1 (4.5%)	0	1 (4.5%)	20 (90.9%)
What is a clinical trial?	0	2 (9.1%)	2 (9.1%)	18 (81.8%)
What is the mixed methods approach?	5 (22.7%)	0	4 (18.2%)	13 (59.1%)
What is photovoice?	0	1 (4.5%)	0	21 (95.5%)
What is the purpose of a focus group?	1 (4.5%)	0	3 (13.6%)	18 (81.8%)
What is a family health history?	0	0	0	22 (100%)
What type of information should you expect to get from a community health assessment?	2 (9.1%)	3 (13.6%)	11 (50%)	6 (27.3%)
What is the overarching goal for Healthy People 2020?	6 (27.3%)	0	6 (27.3%)	10 (45.5%)

Describe the health promotion planning model that you believe is best to prevent and reduce substance abuse in an African American community?	11 (50%)	1 (4.5%)	0	10 (45.5%)
What are the social determinants of health?	1 (4.5%)	1 (4.5%)	1 (4.5%)	19 (86.4%)
List three social determinants of health.	1 (4.5%)	1 (4.5%)	6 (27.3%)	14 (63.6%)
What is research?	0	0	3 (13.6%)	19 (86.4%)
Define racial health disparities.	1 (4.5%)	1 (4.5%)	2 (9.1%)	18 (81.8%)
What are the components of a SMART goal?	4 (18.2%)	1 (4.5%)	0	17 (77.3%)
What is the Odds Ratio?	4 (18.2%)	0	1 (4.5%)	17 (77.3%)
What is a p value?	2 (9.1%)	2 (9.1%)	2 (9.1%)	16 (72.7%)
List an effective method to advocate for a specific health issue in your community.	3 (13.6%)	0	0	15 (68.2%)
How is research used to develop health policy?	3 (13.6%)	0	1 (4.5%)	18 (81.8%)

Table 16: Fellows' Level of Knowledge Related to Genetics in Health

	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)	Mean
I know how to assess the role of genes for health	0	1 (4.5%)	6 (27.3%)	14 (63.6%)	1 (4.5%)	3.7
I know how to assess my genetic risk for disease	0	2 (9.1%)	4 (18.2%)	13 (59.1%)	3 (13.6%)	3.8
I can explain genetic issues to people	0	1 (4.5%)	9 (40.9%)	10 (45.5%)	2 (9.1%)	3.2

When asked to rate their confidence when filling out medical forms by themselves, most of the fellows reported being “extremely confident” filling out medical forms by themselves (72.7%); whereas 18.2% reported that they were “quite a bit confident”, and two fellows (9.1%)

Some newspapers or general magazines publish a special section that focuses on health. In the past 12 months, about how often have you read such health sections?	2	4	6	2	3	3	2	4.4
Some local television news programs include special segments of their newscast that focus on health issues. In the past 12 months, how often have you watched health segments on local news?	1	6	5	2	2	4	2	4.2
Some people notice information about health on the internet, even when they are not trying to find out about a health concern they have or someone in their family has. About how often do you read this sort of health information in the past 12 months?	5	7	4	4	1	0	1	5.3

Finally, fellows were asked to rate their ability to work with numbers in various situations (see Table 19).

Table 19: Fellows’ Rating of Ease of use of Numbers (n=22)

Answer	Scale 0-6	Average Value	Standard Deviation
How good are you at calculating a 15% tip?	Not at all good- Extremely good	5.2	0.91
How good are you at working with fractions?	Not at all good- Extremely good	4.1	1.49
How good are you at working with percentages?	Not at all good- Extremely good	4.5	1.41
How good are out at figuring out how much a shirt would cost if it is 25% off?	Not at all good- Extremely good	4.9	0.91
When reading a newspaper, how helpful are tables and graphs that are part of the story?	Not helpful at all- Extremely helpful	4.0	1.50
When people tell you the chance of something happening, do you prefer that they use words (e.g it rarely happens) or numbers (e.g there is a 1% chance)?	Always prefer words- Always prefer numbers	3.8	1.56
When you hear the weather forecast, do you prefer predictions using percentages (e.g there is a 20% chance of rain today) or predictions using words only (e.g there is a small chance of rain today)?	Always prefer percentages- Always prefer words	1.8	1.79
How often do you find numerical information to be useful?	Never- Very often	4.8	1.02

Program Assessment

The following questions were used to assess the Birmingham GSCR program. As indicated in the final column of Table 20, all means were between 4 and 5, indicating the respondents, on average, agreed or strongly agreed with all statements relating the success of the program.

Table 20: Program Evaluation (n=22)

Question	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)	Mean
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a. An appropriate amount of material was covered during this training.	0	2 (9.1%)	0	8 (36.4%)	12 (54.5%)	4.3
b. The facilitators have been prepared and well organized	0	0	1 (4.5%)	7 (31.8%)	14 (63.6%)	4.6
c. The facilitators seemed knowledgeable about the subject	0	0	0	7 (31.8%)	15 (68.2%)	4.6
d. The information learned in this training was helpful	0	0	0	9 (40.9%)	13 (59.1%)	4.6
e. The structure and format of the training was beneficial to the learning process	0	0	4 (18.2%)	7 (31.8%)	11 (50%)	4.3
f. The training location was convenient for me	3 (13.6%)	5 (22.7%)	4 (18.2%)	3 (13.6%)	7 (31.8%)	3.3
g. The timing of the training sessions fit into my schedule	0	3 (13.6%)	7 (31.8%)	5 (22.7%)	7 (31.8%)	3.7
h. I was satisfied with the training facilities (classroom, meeting scopes, furniture, parking, etc.)	0	0	0	8 (36.4%)	14 (63.6%)	4.8
i. Homework assignments were useful	0	1 (4.5%)	2 (9.1%)	11 (50%)	8 (36.4%)	4.2
j. The amount of homework was appropriate	1 (4.5%)	0	3 (13.6%)	10 (45.5%)	8 (36.4%)	4.1
k. Homework assignments helped me to better understand the lecture material presented to me	1 (4.5%)	2 (9.1%)	3 (13.6%)	8 (36.4%)	8 (36.4%)	4.1
l. Small group activities and discussion were helpful and beneficial to my learning	0	0	4 (18.2%)	8 (36.4%)	10 (45.5%)	4.5

IV. Final Social Network Analysis

The GSCRП Social Network Analysis Survey was conducted for a second time with the Birmingham GSCRП fellows following the last meeting of the cohort for measuring the growth in relationships between the fellows over the 16 weeks of the course. This section compares the network statistics collected at the beginning of the course to those collected at the end.

GSCRP fellows were asked about their potential contributions to improving community health. When asked to check all that apply, the majority of respondents (>50%) feel they can contribute through leadership (57.1%), broad activity for community health priorities (57.1%), and facilitation (52.4%). Three of the ten options were selected by a majority of respondents. When asked to indicate their single most important contribution, “connection to communities that are experiencing health disparities” was the most frequently selected (23.8%). These responses indicate that respondents recognize the importance of social networks, both between those seeking to improve communities and these individuals’ connections to the communities they seek to improve.

Table 21: Contribution to Improving Community Health (n=21)

Response:	Please indicate what you can potentially contribute to improving community health. (Choose all that apply).		What is your single most important contribution to improving community health? (Select one).	
	Pre-GSCRP	Post-GSCRP	Pre-GSCRP	Post-GSCRP
Data resources, including data sets, collection and analysis	10 (37.0%)	6 (28.6%)	1 (3.7%)	3 (14.3%)
Providing objectives to my organization	9 (33.3%)	9 (42.9%)	1 (3.7%)	2 (9.5%)
Specific health expertise	10 (37.0%)	5 (23.8%)	2 (7.4%)	1 (4.8%)
Expertise other than in health	10 (37.0%)	8 (38.1%)	1 (3.7%)	1 (4.8%)
Community connections	18 (66.7%)	7 (33.3%)	3 (11.1%)	2 (9.5%)
Connection to communities that are experiencing health disparities	19 (70.4%)	11 (52.4%)	10 (37.0%)	5 (23.8%)
Facilitation	11 (40.7%)	10 (47.6%)	1 (3.7%)	0
Leadership	19 (70.4%)	12 (57.1%)	2 (7.4%)	1 (4.8%)
Broad activity for community health priorities	8 (29.6%)	12 (57.1%)	5 (18.5%)	3 (14.3%)
Other (please specify)	4 (14.8%)	5 (23.8%)	1 (3.7%)	2 (9.5%)

Higher levels of confidence were reported after GSCRP than before in the ability to achieve success in impacting the community (see Table 22). When asked which aspect of

GSCRCP the fellows believe will help them achieve these goals, five of eight items were selected by a majority of respondents (>50%) (see Table 23).

Table 22: Success in Community Health Impact

Response:	(Pre- Survey) To date, In the next year, how successful do you feel how successful have you been at impacting health in the community? you will be at impacting health in the community?		
	Pre-GSCRCP	Pre-GSCRCP	Post-GSCRCP
Very Successful	0	11 (40.7%)	7 (33.3%)
Successful	6 (22.2%)	9 (33.3%)	11 (53.4%)
Somewhat Successful	12 (44.4%)	6 (22.2%)	2 (9.5%)
Not Successful	5 (18.5%)	1 (3.7%)	0
Not Sure	4 (14.8%)	0	1 (4.8%)

Table 23: GSCRCP Skills for Improving Community Health

Response:	What aspects of GSCRCP do you think will help you achieve these goals? (Choose all that apply)	
	Pre-GSCRCP	Post-GSCRCP
Bringing together diverse individuals	21 (77.8%)	12 (57.1%)
Meeting regularly	13 (48.1%)	10 (47.6%)
Exchanging information/knowledge	27 (100.0%)	13 (61.9%)
Informal relationships created	23 (85.2%)	9 (42.9%)
Grant writing skills	22 (81.5%)	15 (71.4%)
Research skills	20 (74.1%)	17 (81.0%)
Having a shared vision and goals	21 (77.8%)	11 (52.4%)
Collective synergy	18 (66.7%)	9 (42.9%)

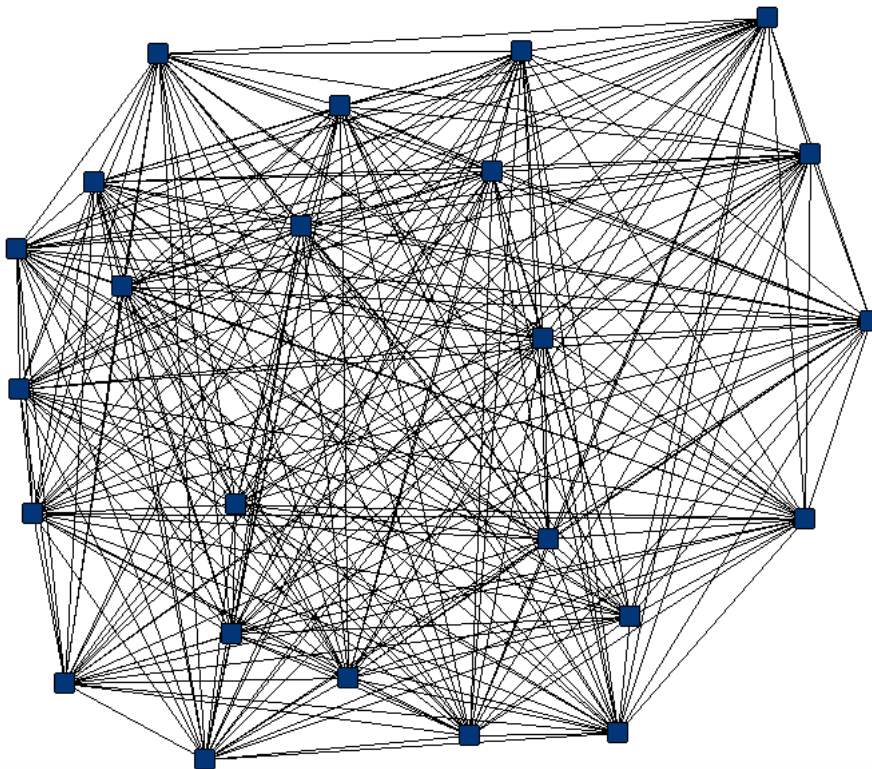
After completing the GSCRCP course, the network cohesion metrics reflect macro-characteristics of the GSCRCP network as one that is quite connected (see Table 24 and Figure 3). All individuals have connections in the network, with the average respondent having 16 connections. The data shows that the average fellow is connected to 16 other fellows after completing the course, whereas fellows were connected to 1.5 others in the network prior to the course. The diameter of the network (the largest geodesic distance within the connected network) is two. This indicates that no fellow is more than two steps away from another fellow in the

connected network. The average distance of the post GSCRП network is 1.193, meaning on average it would take fellows just over one step to reach all other fellows. These measures are provided next to the baseline statistics in the table below to demonstrate growth attributed to the program.

Table 24: Post-GSCRП Social Network Measures of Cohesion (n=21)

Network Measure	Pre-GSCRП Statistic	Post-GSCRП Statistic
Average Degree	1.519	16.143
H-Index	3	15
Density	0.058	0.807
Components	12	1
Component Ratio	0.423	
Connectedness	0.329	1
Fragmentation	0.671	
Closure	0.171	0.874
Average Distance	2.974	1.193
SD Distance	1.497	0.395
Diameter	8	2
Breadth	0.850	0.096
Compactness	0.150	0.904

Figure 3: Post GSCRП Sociogram (n=21)



V. Summary of Program Outcomes

Notable differences include the following:

- Of the 29 fellows who began the program, 22 completed the program.
- Prior to participating in GSCRIP, on average, 53.4% of fellows had mastery of the health-related terms assessed. Post-GSCRIP, on average 75.9% of fellows had mastery of the health-related terms assessed.
- After completing the GSCRIP program, the fellows have developed a strong network, with the average fellow having an average of 16 connections within the cohort.

Appendix A: Course Syllabus