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## Community Advanced Data and Research Analysis: A Mixed Methods Capstone Project

Michael Bernarndo  
*University of Nevada, Las Vegas*

Brandie Green  
*University of Nevada, Las Vegas*

Amber Konold  
*University of Nevada, Las Vegas*

Kathryn Weavil  
*University of Nevada, Las Vegas*

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Community Advanced Data and Research Analysis: A Mixed Methods Capstone Project  
Evaluation

Michael Bernarndo, Brandie Green, Amber Konold and Kathryn Weavil

PUA 729

University of Nevada Las Vegas

## Executive Summary

The Community Advanced Data and Research Analysis project, or CADRA, is project that houses an interdisciplinary research team located at the University of Nevada, Las Vegas. The vision of CADRA, as defined by its stakeholders, is to create positive community outcomes by encouraging and engaging nonprofit organizations, as well as student and professional researchers, to develop and evolve their data management practices. CADRA offers three program options including Nonprofit Audits, Program Development and Grant Writing, and Community Data Mining. The purpose of this program evaluation will be to evaluate the Community Advanced Data and Research Analysis (CADRA) Project, with a specific assessment of their access and obtainability to data in the Las Vegas community.

A convergent parallel mixed methods design was used, where qualitative and quantitative data were collected concurrently, analyzed separately, and then merged. In this study, quantitative data was used to assess whether nonprofits, higher education institution faculty, or public sector employees had ease and access in obtaining data. The quantitative data was collected via written survey questionnaires from any nonprofit organization, any higher-education faculty member, and any public sector employee. The qualitative semi-structured interviews were simultaneously conducted by performing a benchmark analysis of existing community data centers in an effort to explore existing program methodology and best practices.

The program evaluation yielded various significant findings that may help CADRA improve its process and efficiency. Results of both the survey and benchmark analysis indicated that the three primary focuses of CADRA should be on: social networking amongst the primary stakeholder groups, implementation as the local data clearinghouse for Nevada, as well as, establishment of a long-term funding resource. It is our hope that CADRA members take this

alpha analysis and use it to better shape this program throughout its maturation to fit the needs of its users. We strongly recommend a beta analysis is conducted as well in the future, to better address the evolving needs of this program.

### Introduction

The Community Advanced Data and Research Analysis project, or CADRA, is project that houses an interdisciplinary research team located at the University of Nevada, Las Vegas. The purpose of the this newly implemented program is to oversee the development of the Clark County Data Hub, as well as expand the existing MyResearcher data sets created by Applied Analysis. Currently the lab is located in the School of Environmental and Public Affairs facility on the UNLV campus and its maturation will be overseen by members of the CADRA team as partnering with the Nonprofit, Community, Leadership Initiative (NCLI). The researchers are tasked with completing a Community Needs Assessment for the United Way of Southern Nevada (UWSN) every two years, as well as to collect data for Applied Analysis to incorporate in their MyResearcher database. The program will also create grant writing initiatives for nonprofit organizations in the area. That, along with the focus on data management is designed to optimize positive outcomes for the community.

The vision of CADRA, as defined by its stakeholders, is to create positive community outcomes by encouraging and engaging nonprofit organizations, as well as student and professional researchers, to develop and evolve their data management practices. However, due to the program's infancy, and ever evolving structural design, a community needs assessment to

gage awareness and expectations, was vital to the success of this project. The aim of this paper is to provide an overview of the growing data centric nature of community nonprofit organizations, and demonstrate, through tangible data collection and interpretation, whether or not the need for CADRA and its services is perceived or actual.

## Literature Review

### Introduction

In order to gain a better understanding of the role data plays in nonprofit organizations, faculty research and the community, a review of all current literature was necessary. The following literature review provides an overview of relevant academic publications that, in part, addresses the program evaluation and data collection and utilization relationship.

### Summary

1. *Using Social Network Analysis to Enhance Nonprofit Organizational Research Capacity: A Case Study*, by Johnson, Jennifer A., Julie A. Honnold, and F. Paul Stevens

This article speaks on the potential benefits of collaboration between a nonprofit agency and its immediate neighbor organizations. A local funding agency in Virginia commissioned a study to look at the ways in which social network analysis (SNA) can enhance the data resources available to nonprofits for funding and grant requests. SNA is a visually descriptive methodology used in social science that maps and measures connectivity. The centralized data is then used as a metric. The article presents a case study of a network of 52 nonprofit organizations to illustrate the how the social network analysis works and whether or not it is a viable option for organizations to utilize. The ultimate goal is to produce tangible data collection to increase the strength and merit of grant requests that are growing more specific with

their application criteria, and often times rely heavily on data outputs.

The research objectives for this study were “(a) to explore the viability of SNA in terms of research questions specific to nonprofit organizations and (b) to conduct a pretest of a networking initiative just launched by the funding agency intended to facilitate inter-organizational connections among local nonprofits in a specified geographical region.” (Johnson et. al, 494). Ultimately, the article concludes that, “Participation in networks enhances an NPO’s innovation in services and acquisition of can improve organizational performance (Galaskiewicz et al., 2006), can sustain and strength collaborative relationships (Guo & Acar, 2005), and increases the organization’s chances of survival (Hager et al., 2004),” (Johnson et. al, 509). In other words, there is increased access to funding and increased productivity and outputs when organizations and nonprofits collaborate and share information.

## *2. The Research Practices and Needs of Non-Profit Organizations in an Urban Center by Randy Stoker*

This article addresses the question of whether or not nonprofit organizations have a need for better data management practices and if they are successfully utilizing current research and incorporating findings. The study included 80 nonprofit organizations in Toledo, Ohio each of whom completed a survey focused on their data needs and practices, (Stoeker, 101).

Table 2. Level of Analysis at Which Nonprofits Collect Data

Level of Analysis	Number reporting
Individual level, i.e. children, youth or adults	72
Family level	44
Neighborhood/community level	23
City level	29
County level	28
Regional level, i.e. Northwest Ohio	19
State level	14
National level	9

The survey found that nonprofits collect data on a wide variety of topics, but do not use much of the data that they collect, and do not collect much data that could be useful for other groups, particularly neighborhood organizations. The idea is that without being efficient in not only the collection, but the utilization of data, small to medium sized nonprofit organizations fall prey to larger groups who can impose performance standards or measures.

Two central questions of the study were: How much research capacity do nonprofit organizations have? How much do they need? One key finding of this study showed that “Toledo nonprofits have piles and piles of data. Seventy-one of the 80 organizations store data more than three years. On average, 61% of the data is saved in paper files, likely creating both space and data recovery issues for many nonprofits,” (Stoeker, 104).

Table 3. Topics on which Nonprofits Collect Data

Topic	Number Reporting
Age	61
Sex	59
Race/ethnicity	52
Street/neighborhood-level address data	45
Family characteristics	35
Previous program participant	35
Employment status	34
Physical health conditions or disabilities	33
Education level	32
Client contact with other organizations	28
Mental health conditions	26
Funding resources	25
Transportation needs	22
Native or non-native English speaker	21
Criminal record	19
School system for children	17
Religious affiliation	15
Drug/alcohol treatment	13
Leadership skill	6

The article suggests four potential areas of improvement, which are:

- Providing better research methods training for nonprofit staff and volunteers.
- Educating funders on the importance of supporting nonprofit research and data management capacity
- Providing better stock databases for nonprofits to easily use.
- Engaging higher education students and faculty in nonprofit research data collection and management, (Stoeker, 113).

*3. Community-Based Program Research: Context, Program Readiness, and Evaluation Usefulness*, by Jay A. Mancini, Lydia I. Marek, Richard A. W. Byrne, Angela J. Huebner



This article deals with the relationship between individuals who manage and oversee operations of nonprofit organizations with program evaluators. The idea is, if you improve the evaluator/organization partnership and make it more harmonious, the overall outcome of the organization improves. This can be done through a series of quality control questions that both parties can utilize to make sure that the communication is clear and that the projected outcomes remain the same. One aspect of this paper is identifying whether or not a program is “ready” for evaluation. There are three key questions that are posed, (Mancini et. al, 11)

(1) What are the contextual influences on program development and evaluation research efforts?

(2) Is the program ready for evaluation?

(3) Does the evaluation research “work” for the program?”

The article further outlines detailed questions for each subsection that should be asked about and discussed throughout the evaluation journey, (Mancini et. al, 12). They are as follows:

- Is what we know about the community informed by data collected by some agency or organization, or is it based on anecdotes?

- How do we describe the community?

- Who are the programs serving?

- Over the past several years how has this community changed, if at all? Over the next several years are particular changes expected?

The article states that the main questions that should be asked by evaluators are, (Mancini et. al, 14):

- Is the program fully active and, if so, for how long?
- Are desired program results specific and clear enough so that they can be assessed?
- Are program activities consistent with the program purpose and its desired results?
- What is the program intervention? Which dimensions of what occurs in the program are related to particular changes that are anticipated? Is the understanding of the intervention clear and does it seem that results from the intervention can be observed?
- Can the program be evaluated and its merit supported or not supported?

#### 4. *Challenging institutional barriers to community-based research*, by Randy Stoeker

As the titles, the main focus of this article is recognizing and developing methods to break through various barriers of community-based research. Specifically the article targets a case involving community/campus collaboration and utilizing students as primary researchers. The final conclusion that the researches come to is, “The main way to equalize partnership power between higher education institutions and communities is to equalize the information power of the two. That does not mean that power is not fundamentally material, rooted in resource inequalities. But the primary form of campus–community partnerships revolves around information processes, and provides the first open door to equality and justice.” (Stoeker, 54). In other words there has to be a positive flow of information for collaboration success.

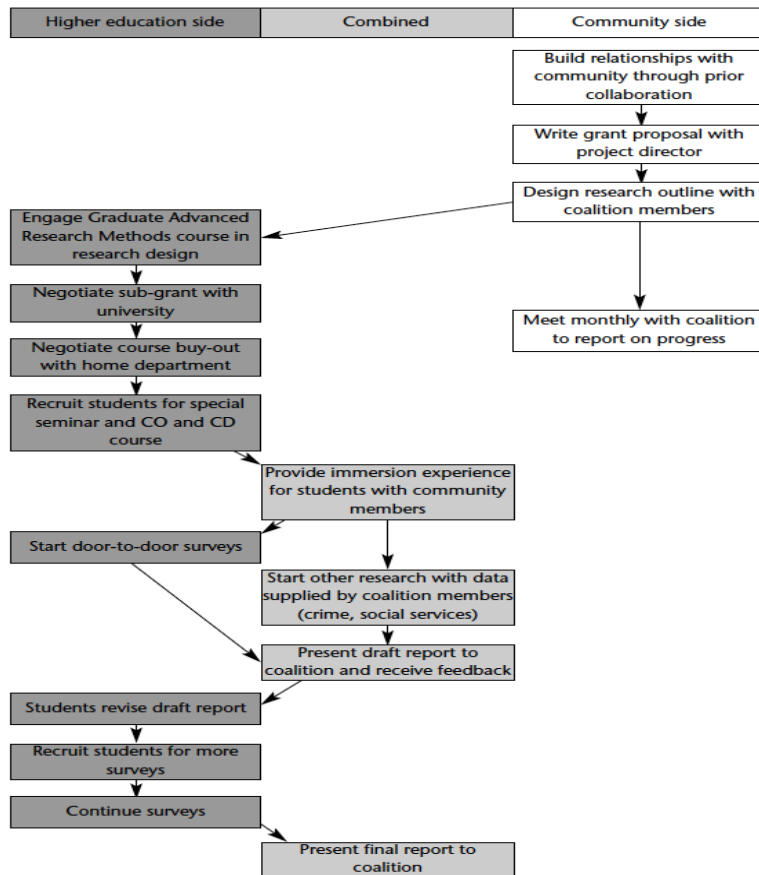


Figure 1 Campus and community roles in CBR

### 5. *Assessing the Effectiveness of Capacity-Building Initiatives: Seven Issues for the Field* by Kennard T. Wing

This article outlines two of the most recent trends in philanthropy and nonprofit organizations which include an increased emphasis on “measurable outcomes and greater investment in capacity building or organizational effectiveness,” (Stoeker, 154). This leads the authors to try and figure out how exactly can you measure capacity building? The answer lies in seven questions that must be addressed upon assessment for the future of measuring organizational capacity building. These seven questions according to the article are:

1. *How can an abstract concept be concretely measured?*

- With properly and specifically defined terms and matrices

*2. How can we measure performance improvement when we cannot measure performance?*

-The article suggests to measure a particular outcome and whether it is improving or declining across the organization

*3. Against whose goals should be measure improvement?*

-The goals which the participants set for themselves because realistically they are much more likely to follow through on them

*4. What can be done about unrealistic timetables for both capacity building and its relationships to program evaluators?*

-The organization must have realistic expectations for the long run in order to not compromise the integrity of the institution. Short-term goals must not be met at the expensive of long-term gain.

*5. How can we document how soft people relate to hard systems?*

-“It is better to do a poor job evaluating a good intervention than a great job evaluating a pathetic one.”

*6. Should be measure participants behavior change or clients internal learning?*

- “The evaluator seeks measurable external changes. The consultant, on the other hand, particularly when working with senior executives, often tends to focus on the clients’ internal learning. The consultant believes that, unless the client internalizes the learning, any external change will be temporary and, in the case of behavior, possibly phony. Thus, external change without an “Aha!” is empty. The evaluator believes that insight alone has no cash value: Actions

“speak louder than words,” (Stoeker, 156).

In other words, change is difficult and if the participants don't internalize the changes and make them into habits all of the previous instruction will be wasted as behavioral patterns will resort back to the status quo.

*7. How can researchers design a study when consultants keep changing what they are working on?*

- “Foundation and nonprofit executives need to be aware that there are real limits to evaluation. It would be foolish to limit interventions to what can be effectively evaluated. Instead, we have to keep those limitations in mind when Capacity-Building Initiatives using evaluation results concerning a capacity-building intervention that is operating, in part, beyond those limits,” (Stoeker, 157).

*6. Nonprofits, Funders, and Evaluation Accountability in Action* by Joanne G. Carmen

This article addresses what grant funders are seeking when they ask for performance and evaluation data, and whether or not those nonprofit organizations are able to comply with that request. The article ran tests on a series of six hypotheses and found that contrary to popular opinion, there is a widespread move towards evaluation and performance measurement data only in organizations that claim Federal or United Way funding, (Carmen, 3). They did this by surveying nonprofit organizations including one on one interview with 31 employees and 10 funding sources in New York State. Those seeking grants at the state and local level were not, in general, required to submit outcome data. The following six hypotheses that were tested were as follows, (Carmen, 3):

Hypothesis 1: Nonprofits that receive a higher percentage of funding from federal government sources are more likely to comply with external monitoring requirements.

Hypothesis 2: Nonprofits that receive a higher percentage of funding from state and local government sources are more likely to comply with external monitoring requirements.

Hypothesis 3: Nonprofits that receive a higher percentage of funding from the United Way are more likely to engage in descriptive reporting activities.

Hypothesis 4: Nonprofits that receive a higher percentage of funding from foundations are more likely to engage in descriptive reporting activities.

Hypothesis 5: Nonprofits that receive a higher percentage of funding from the United Way are more likely to engage in evaluation and performance measurement activities.

Hypothesis 6: Nonprofits that receive a higher percentage of funding from the federal government are more likely to engage in evaluation and performance measurement activities

The results of the testing showed that for Federal Funding, “The regression models indicated that federal funding was a significant predictor for the extent to which nonprofit organizations comply with external monitoring requirements ( $\beta=.370$ ) and conducting evaluation and performance measurement ( $\beta=.219$ ). These findings were consistent with the hypotheses (Hypotheses 1 and 6). For state and local funding, “The regression models indicated that state and local government funding was a significant predictor of external monitoring ( $\beta=.281$ ) as expected (Hypothesis 2),” (Carmen, 8).

*7. Financing and Evaluating Nonprofits: Mapping the Knowledge Base of Nonprofit Management in the Human Services* by Sara L. Schwartz and Michael J. Austin

This paper deals with the knowledge base that nonprofit organizations have in terms of their ability to map their financial base. Because of varied political and economic climates these organization have had to diversify funding sources and also provide detailed accounts of budgeting due to increased emphasis on accountability. This paper is inherently a literature review in it of itself that browses all of the current literature where five apparent themes were discovered. The different types of “themes” that the researchers isolated were, (Schwartz et. al, 6):

- *“Financing and Evaluating Nonprofits:* includes articles considering the financial management of nonprofits, sources of revenue such as philanthropy and fundraising, social enterprise, accountability requirements, program evaluation, and management information systems.

- *Leading and Managing Nonprofits* includes articles addressing nonprofit history, organizational theory, leadership, management, nonprofit governance, communications and marketing, and managing external relations that include inter-organizational relationships as well as relations with external environments such as the law, public policy, professional associations, and the community at large.

- *Managing Human Resources* includes articles addressing employee wellbeing, workforce training and education, employee management and supervision, employee diversity, and volunteer workforces.

- *Managing Different Types of Nonprofits* includes articles that research and classify nonprofit organizations; explore domestic nonprofit service sectors, membership associations, community development nonprofits and citizen political nonprofits.

-*Managing NGOs Worldwide* includes the management of non-governmental organizations in different countries around the world related to managing and leading, financing and evaluating,

*Figure 1: Mapping the Major Topics on Nonprofit Management*

<b>Leading and Managing Nonprofits</b>	<b>Financing and Evaluating Nonprofits</b>	<b>Managing Nonprofit Human Resources</b>	<b>Managing Different Types of Nonprofits</b>		<b>Managing NGOs Worldwide</b>
Nonprofit History	Financial Management	Personnel	Research and Classification of Nonprofits		Leading and Managing NGOs
Nonprofit Organizations – Theory	Philanthropy	Workforce Diversity	Membership Associations		Financing and Evaluating NGOs
Governance	Fundraising	Workforce Education and Training	Citizen/Political Nonprofits		Managing NGO Human Resources
Leadership	Social Enterprise	Volunteers	Community Development Nonprofits		Managing Different Types of NGOs
Management	Evaluation and Information Management		Nonprofit Service Sectors		
Managing External Relations					
Marketing Nonprofit Services					
Policy, Law, and Ethics					

human resource management, and managing different types of non-governmental organizations.”

8. *Measuring Outcomes of United Way–Funded Programs: Expectations and Reality* by Michael Hendricks, Margaret C. Plantz, Kathleen J. Pritchard



Because United Way's approach to program outcome measurement is one of the most widely used systems throughout the nonprofit sector, this article wanted to examine whether or not the expectations of its effectiveness measure up to the reality. Some of the distinguishing characteristics of the United Way approach include, (Hendricks et. al, 15):

- Focus on outcomes
- Quantitative measure of outcomes
- Consistent, systematic measurement
- Main objective is program improvement
- Local measures necessary
- Logical model
- Programs identify their own outcomes
- Long time horizon for implementation
- Analysis done by in house staff of United Way

Overall however, there was a wide array of experiences with the United Way, where some were negative and some were positive. There are certain factors that are out of the organizations control, which can have an impact on the success of the United Way's methodology. This includes the commitment of agency leadership and the inherent difficulty of the measured outcomes.

**Table 2**  
**Descriptive Statistics (N = 141)**

Variable	Range	Mean	Standard Deviation
Budget (in thousands)	15-41,000	4,036.82	7,157.03
Age (in years)	3-156	30.45	23.71
Social services	0-1	0.35	0.48
Community development services	0-1	0.33	0.47
Development disabilities services	0-1	0.32	0.47
Percentage federal government	0-100	19.85	28.62
Percentage state/local government	0-100	42.68	32.65
Percentage foundations	0-80	3.75	10.28
Percentage United Way	0-30	2.25	5.32
Percentage other sources	0-100	32.72	34.46
External monitoring and compliance activities	0-3	2.33	0.83
Descriptive reporting activities	0-4	3.16	.98
Evaluation and performance measurement activities	0-4	1.89	1.19

**Table 3**  
**Bivariate Correlations Among the Independent Variables (N = 141)**

	1	2	3	4	5	6	7
Budget	(1)						
Age	.228*	(1)					
Federal government funding	.216*	-.105	(1)				
State/local government funding	.082	-.067	-.300*	(1)			
Foundation funding	-.127	-.042	-.180*	-.230*	(1)		

Overall these articles demonstrate a trend towards the centralization and utilization of data and the effect that has on an organization's ability to apply for and be awarded federal funding. There is a real correlation between how efficient an organization is with managing its data and the ability of that nonprofit to receive funding as well as deliver on expected outcomes, (Hendricks et. al, 35).

## Findings

Overall, the studies whose findings were particularly relevant to the program evaluation of CADRA were *Assessing the Effectiveness of Capacity-Building Initiatives: Seven Issues for the Field* by Kennard T. Wing, and *Nonprofits, Funders, and Evaluation Accountability in Action* by Joanne G. Carmen. The first article deals specifically with the current demand for data inclusion in grant funding requirements, and outlines seven questions that act as guidelines for organizations to handle capacity building and data management. The second article shows an actual statistical correlation with expected data outcomes and federal or state funding. In both of these cases, the evidence is clear that understanding and growing data management and collection is a vital component of expanding organizations, demonstrating a real need for projects such as CADRA.

## Purpose

### Statement of Problem

In light of the research reviewed on community based research centers, institutional barriers to community research, and the research practices of nonprofit organizations, there is no current research conducted to evaluate the need for a community driven data center in the Las Vegas community.

The purpose of this program evaluation will be to evaluate the Community Advanced Data and Research Analysis (CADRA) Project, with a specific assessment of their access and obtainability to data in the Las Vegas community.

A convergent parallel mixed methods design was used, and is a type of design in which qualitative and quantitative data were collected concurrently, analyzed separately, and then merged. In this study, quantitative data was used to assess whether nonprofits, higher education institution faculty, or public sector employees had ease and access in obtaining data. Furthermore, did they perceive a need for assistance in analysis and do they desire to contribute to further community collaboration. The quantitative data was collected via written survey questionnaires from any nonprofit organization, any higher-education faculty member, and any public sector employee. The qualitative semi-structured interviews were simultaneously conducted by performing a benchmark analysis of existing community data centers in an effort to explore existing program methodology and best practices.

The reason for collecting both quantitative and qualitative data is to achieve triangulation and a greater data context. As Creswell and Clark (2011) state, triangulation refers to a traditional view where quantitative and qualitative research is combined, in order to be mutually

corroborated for a greater validity (p. 62). By collecting quantitative data that evaluates constituents' perceptions of access and obtainability, and subsequently collecting qualitative data that provides input regarding feasibility, research can more effectively add context to the data when interpreted concurrently.

### Research Questions

1. Does CADRA provide increased access and obtainability to data within Las Vegas community?
2. Does the increased access appropriately target the three stakeholder groups?

### Methods

#### Participants

Participants for the quantitative portion of the program evaluation were selected randomly with no limitation to survey response. Three target population groups were identified upon the foundation of the CADRA evaluation project, and were as follows: higher education graduate students and faculty, nonprofit organizations, and public sector employees.

A standardized email was sent to all of the various participant groups via methods as outlined below detailing the survey information and soliciting their participation. To be considered for inclusion into the study, participants were to have been in one of the above target population groups. There were no exclusion factors for this survey research.

The benchmark analysis had seven pre-determined community data collection programs identified that were similar in scope to CADRA. The programs were selected in an effort to compile a comprehensive analysis of best practices and current trends. The Alpha Group, with help from Capstone Director Dr. Jaewon Lim, identified the following well-established data labs in which to contact:

1. University of Washington DataLab,
2. UC Berkeley D-Lab,
3. Princeton University Data & Statistical Services (DSS) Lab,
4. University of Tennessee Census State Data Center,
5. Ball State University CBER Data Center,
6. Penn State Social Capital Index,
7. Minnesota Population Center

### Evaluation Methodology

In order to identify the need for a centralized data repository to determine if CADRA will be able to provide increased access and attainability to data driven decision making within the Las Vegas community, a mixed methods research approach was used. The evaluation team chose to conduct a (qualitative) benchmark study to identify data collection programs similar in scope to CADRA with the desire to identify best practices and make recommendations for CADRA's future direction. The team also elected to create and distribute a (quantitative) survey in order to identify particular data needs among the study's three target populations (institutions of higher learning, nonprofit organizations, and public agencies).

### **Benchmark Analysis (Qualitative)**

The purpose of the benchmark analysis was to query well-known and established programs via qualitative interviews to see which methods and best practices they employ which may help CADRA become even more successful through implementation.

An effort began in April of 2015 to reach out and establish an internal point of contact with each data lab to help facilitate an interview with the program director. This effort began by reaching out to each program's generic mailbox on two separate occasions; only 3 of the 7 (42.8%), were responsive. These three labs include Princeton University Data & Statistical Services (DSS) Lab, the University of Tennessee Census State Data Center, and the University of Washington DataLab. The Alpha Group was able to go on and interview each of these labs, with the exception of the University of Washington DataLab which was initially responsive and then removed from the list after subsequent attempts to coordinate an interview were ignored. An example of the email dialogue can be found in Appendix X – Benchmark Information.

In an attempt to prompt a response from the four (4) unresponsive data labs, their websites were reviewed, and the introduction email was written to the program director with the Data Lab in the CC field. This approach was greeted with a response from the UC Berkeley D-Lab and the University of Minnesota Population Center (MPC), which each later set aside the time for an interview.

Despite numerous attempts to contact both Ball State University's CBER Data Center and Penn State's Social Capital Index, the programs were unresponsive and therefore removed from the list.

The figure 4.1 (below) depicts the program, contact, if they were responsive/unresponsive, and if the Alpha Group was able to interview them to be part of this benchmark study.

Program	Contact	Responsive/ Unresponsive	Provided Interview
University of Washington DataLab	Jevin West	Responsive	No
UC Berkeley D-Lab	Jon Stiles	Responsive	<b>Yes</b>
Princeton University Data & Statistical Services (DSS) Lab	Bobray Bordelon	Responsive	<b>Yes</b>
University of Tennessee Census State Data Center	Melissa Stefanini	Responsive	<b>Yes</b>
Ball State University CBER Data Center	Lisa Goodpaster	<b>Unresponsive</b>	No
Penn State Social Capital Index	Katey Burke	<b>Unresponsive</b>	No
Minnesota Population Center	Catherine Fitch	Responsive	<b>Yes</b>

*Figure 4.1 – Benchmark Study Contact Matrix*

In total, four (4) data labs chose to participate in this study and were interviewed. The Alpha Group extends our sincerest Thanks to Dr. Jon Stiles, Dr. Catherine Fitch, Ms. Melissa Stefanini, and Mr. Bobray Bordelon for taking the time to help make this study possible.

The following sections will provide additional information into the programs chosen for insertion into this study, descriptive analysis of the questions asked including commonalities, disparities, and findings, and recommendations and lessons learned. This information may be helpful to future program evaluators as CADRA evolves from its infancy to an established program.

## **Programs Studied**

The aforementioned data labs were all selected for their relevancy to CADRA’s mission, as well as their prestige within the research community. In addition to the qualitative interviews, Alpha Group reviewed each lab’s website for relevant information to include in this baseline study to make it as complete as possible. The following is a summary of the data collected:

### **The University of Washington (UW) DataLab**

According to their website, the University of Washington’s DataLab is a:

*“...nexus for research on Data Science and Analytics at the UW iSchool. We study large-scale, heterogeneous human data in an effort to understand why individuals, consumers, and societies behave the way they do. Our goal is to use data for the social good, in an ethical manner that can inform policy and impact lives for the better. As the focal point for industry partnerships related to “big data” and business analytics, the DataLab also provides infrastructure and support for student training and engagement in projects that involve the analysis of large datasets.”<sup>1</sup>*

This program was thought to very closely coincide with CADRA’s goal of providing descriptive analysis and trends of socioeconomic data to the community to enhance data literacy. Unfortunately, the UW DataLab was not available for an interview, however, in review of their website, the UW Datalab is a multi-disciplinary team with a common purpose; data science for social good. Their research uses “Big Data” to better understand the behavior of individuals and society. Some core areas in which the UW DataLab is currently focused includes: societal and economic problems in developing countries, crisis informatics, and economic and social processes that drive scholarly communication. In societal and economic problems in developing countries, UW students have the opportunity to spend time in the field to better understand the cultures that supply the data in which they are studying. For crisis informatics, UW DataLab is analyzing how information spreads over social media during disasters, including what indicators people pay attention to, and the credibility of the information available to develop better disaster response mechanisms. The DataLab is also trying to address the thousands of scholarly publications being created every day and the major modern challenge of information overload.

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<sup>1</sup> UW Information School, Retrieved July 31, 2015, from <https://datalab.ischool.uw.edu/about>



The academically diverse students play an essential role in research from planning through publication, while the faculty members share their research and work with collaborators at other Universities, Companies, and Governments all over the world.

### **The University of California (UC) Berkeley D-Lab**

According to their website, the UC Berkeley D-lab:

*“...helps Berkeley faculty, staff, and graduate students move forward with world-class research in data intensive social science. We think of data as an expansive category, one that is constantly changing as the research frontier moves. We offer a venue for methodological exchange from all corners of campus and across its bounds.*

*D-Lab provides cross-disciplinary resources for in-depth consulting and advising, access to staff support, and training and provisioning for software and other infrastructure needs. Networking with other Berkeley centers and facilities and with our departments and schools, we offer our services to researchers across the disciplines and underwrite the breadth of excellence of Berkeley’s graduate programs and faculty research. D-Lab builds networks through which Berkeley researchers can connect with users of social science data in the off-campus world.”<sup>2</sup>*

The program at UC Berkeley provides services, support, and a location for research design and experimentation in social science data. UC Berkeley’s D-Lab was not available for

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<sup>2</sup> University of California D-Lab, Retrieved July 31, 2015, from <http://dlab.berkeley.edu/about-d-lab>

interview, but upon detailed review of their website, Alpha Group was able to find relevant information for inclusion to this study. D-Lab targets its services at UC Berkeley social science researchers, which consist of, graduate students, staff, and faculty, and their online resources are available to the public. Initial funding investments in D-Lab came from the Vice Chancellor for Research, the Provost, the Dean of Social Science and the Deans of social science faculties across Berkeley. D-Lab reports to the Vice Chancellor for Research and is overseen by a governing board. There are several workshops available for graduate students who need data for the writing of their thesis or dissertation, and D-Lab can provide consulting services for the writing of grant-funded research on a paid or recharge basis.

### **Princeton University Data & Statistical Services (DSS) Lab**

Princeton University's DSS Lab has been around for over 50 years and is housed within the Firestone Library. DSS provides statistical and software assistance in quantitative analysis of electronic data as part of independent research projects, such as junior papers, senior theses, term papers, dissertations, and scholarly articles. The lab is available to all currently enrolled or employed members of Princeton University and focuses on social science data, statistics, science, and humanities. Since the lab is housed in the library, there is support for researchers with locating appropriate data, preparing restricted data plans, determining methodologies, and getting ready to use statistical packages. DSS has informal partnerships with GIS (another part of the library system), Library's Systems Department (they manage and maintain the many servers), Office of Population Research Data Archive (largely informational in terms of acquisitions), and the Center for Health & Well Being Data Archive (non-restricted data). The program is funded by a regular line in the library budget (staff, software, collections, etc...). The lab does not assist with grant writing, and because Princeton is a private university, its resources are restricted to its

own researchers, therefore no work is done to support the nonprofit community. DSS is staffed by three full-time librarians; two full-time statistical consultants; 1/2 FTE support staff member; and 40 hours of Graduate Assistant support per week. The lab does not normally advertise or market as they are very heavily used and part of numerous classes, so campus awareness is high.

### **University of Tennessee Census State Data Center**

According to their website, the University of Tennessee Census State Data Center (SDC) is a:

*“...State/Census Bureau cooperative program with a mission of providing efficient access to US Census data and products, providing training and technical assistance to data users, and providing feedback to the Census Bureau on data usability, as well as state and local government data needs and operational issues. The State Data Center disseminates Census and other data to the public through a network of over 1,800 state and local agencies, libraries, universities, chambers of commerce, and others. The State Data Centers are the official source of demographic, economic, and social statistics, and redistricting data produced by the Census Bureau.”<sup>3</sup>*

The SDC program started in 1978 and the Center for Business and Economic Research (CBER) at UT, Knoxville, has been the lead agency since 1980. Ms. Melissa Stefanini described their main audience as data users of all kinds. The services provided are to the Census, to affiliates, and to data users across the state. The SDC provides:

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<sup>3</sup> University of Tennessee Census State Data Center, Retrieved July 31, 2015, from <http://tndata.utk.edu/>

- Technical assistance on Census data analysis and mapping,
- Efficient access to Census Bureau data and data products, including timely data summaries, research, and statistical reports,
- User-training workshops and conferences on all aspects of demographic data to a broad range of users,
- A State Data Center website (<http://tndata.utk.edu>),
- An E-newsletter
- Service as the primary contact for data users who require demographic or economic data for Tennessee, its counties, cities, tracts, blocks and zip code areas.
- Service as the official Federal-State Population Estimates Cooperative representative to the Census Bureau's Population Estimates Division to include data gathering, estimates review and dissemination.

The SDC is a partnership between the state of Tennessee (TN) and the US Census Bureau. It is funded through the TN Department of Finance & Administration. Methods of raising awareness include annual data users' conference as well as other workshops across the state to help get data users be more efficient and more aware of what the Census is working on and what data is available. They are currently in a large social media push and have a Twitter, Facebook, and LinkedIn account, SDC website, E-newsletter, and large distribution lists for email blasts. They also utilize press releases when something exciting is released by the Census with a description of why it is important and what happened in the state.

### **Ball State University Center for Business and Economic (CBER) Data Center**

Ball State University's CBER Data Center was unresponsive, however, according to their website, the CBER Data Center's mission is to: "...offer simple, visual, easily accessible

*economic web tools for economic developers, community leaders, grant writers, policymakers, and the general public.”*<sup>4</sup>

The CBER Data Center conducts relevant and timely public policy research on a wide range of economic issues affecting the state and nation. It is an economic policy and forecasting research center which covers topics including public finance, regional economics, manufacturing, transportation, and energy sector studies.

### **Penn State Social Capital Index**

The Penn State Social Capital Index, also known as the Northeast Regional Center for Rural Development (NERCRD), was also unresponsive. Their website however had a plethora of data on the Center’s mission, vision, organization, goals, and strategies, which the team felt was sufficient for inclusion into this study. According to their website, the NERCRD is:

*“...dedicated to providing research-based information that helps create regional prosperity through entrepreneurial and cluster-based innovation, while assuring balanced uses of natural resources in livable communities in the northeastern United States.”*<sup>5</sup>

The Northeast Center is one of four Regional Rural Development Centers established in the early 1970s at Cornell University, and later moved to Penn State in 1985. Although NERCRD’s mission focuses on enhancing the capacity of Land Grant Universities to foster regional prosperity and rural development, and is dissimilar to CADRA’s, it was chosen because of its success and prestige in the data community. The Center’s belief is that small towns and

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<sup>4</sup> Ball State University Center for Business and Economic Data Center, Retrieved July 31, 2015, from <http://cms.bsu.edu/academics/centersandinstitutes/bbr/datacenter>

<sup>5</sup> Penn State College of Agricultural Sciences, Retrieved July 31, 2015, from <http://aeese.psu.edu/nercrd/about>

rural places are becoming increasingly more complex and multi-dimensional in the context of today's global society. NERCRD's major core funding comes from the National Institute of Food and Agriculture (NIFA) and the region's land-grant universities. Additionally, other federal and state agencies, private foundations, and public interests contribute funding in support of various special programs on case-by-case basis. NERCRD is governed by a Board of Directors and a Regional Technical Advisory Committee which have set several goals for the program:

- Goal 1: Improving Economic Competitiveness, Diversity and Adaptability of Small and/or Rural Communities
- Goal 2: Facilitating Development of Policies that Enhance the Well-being of Rural People and Small Towns
- Goal 3: Increasing Community Capacity to Deal with Change
- Goal 4: Increasing Social viability through Enhancing the Self-reliance of Families and Communities
- Goal 5: Linking Natural Resource Industries, Including Agriculture, with Community and Environmental Resources

The Center raises awareness through: assistance of Northeast states in responding to development needs; workshop facilitation and conference participation on current rural developmental issues, grant support activities, network coordination among rural development partners, and production and distribution of research and educational materials through newsletters, annual reports, its web page, and other publications. Its staff consists of a program director, four administrative staffers, two postdoctoral scholars, and five graduate assistants.

## **Minnesota Population Center (MPC)**

The Minnesota Population Center (MPC) was established in March 2000 by founding collaborators from four colleges. The MPC focuses on Social Sciences and Health Data with an internal audience of the University community (i.e. students and faculty) in mind. Infrastructure Projects are federally funded and have an advisory board, with additional University funding available from the Office of the VP for Research for University funded staff. The major external stakeholder for the MPC is the US Census Bureau's National Statistical Office. The MPC provides support to through seven shared cores and all MPC members are eligible to use the services of these cores. Cores also offer fee-based services for non-members. According to the MPC website, each core's function is as follows:

*“The Administrative Core maximizes the productivity of MPC researchers by reducing administrative burdens and handling day-to-day operations of the Center.*

*The Information Technology Core maintains computing hardware and software for data analysis and provides software development services for data creation, management and dissemination.*

*The Data Access Core manages and disseminates our own data collections and provides MPC researchers with access to demographic data from other centers and archives.*

*The Data Services Core provides data processing, coding, and cleaning services for MPC-based research projects, and provides a variety of demographic data services to external clients worldwide.*

*The Spatial Analysis Core provides research support for spatial data creation and analysis for MPC-based research projects and provides GIS training for MPC members.*

*The Dissemination and Outreach Core provides user support for MPC-produced data products, maximizing the accessibility of MPC data not only for academic researchers but also for students, policy makers, journalists and the general public.*

*The Data Integration Core specializes in harmonization processes and metadata creation, so that variables from multiple datasets may be readily subject to comparisons across time and space.”<sup>6</sup>*

The Center is staffed by six full-time University funded employees, and numerous research staff working on infrastructure awards and funded by grants. At the time of the interview with Dr. Fitch, there were 168 total research staffers in the MPC of which 75 are non-students (i.e. research staff, software developers, etc...). To raise awareness, Academic researchers exhibit at special events for professional societies, they sponsor University hosted

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<sup>6</sup> University of Minnesota, Retrieved July 31, 2015, from <https://www.pop.umn.edu/about>



publicized events and data workshops, and most importantly, scholarly articles get cited using MPC data. The MPC offers program development grant writing support for affiliated research, and assisted with the writing of nearly 30 grants in 2014. At this time however, they do not currently work with the local nonprofit community.

### **Survey (Quantitative)**

The evaluation team created an online survey using Qualtrics software. Survey content and structure was developed by Alpha Group in conjunction with input from CADRA program staff members. The information provided by the CADRA program helped Alpha Group develop the survey questions which were then submitted to CADRA, specifically John Wagner and Lola Brooks, for approval. Alpha Group received suggested changes to the survey questions and formatting, and the survey was edited accordingly. Upon completion of all components of the survey, it was distributed to the three target populations and the survey collection period began.

A link to the survey was disseminated to UNLV research faculty, nonprofit community agencies identified by UNLV's Nonprofit, Community, and Leadership Initiative (NCLI), and government agencies via email. Group members also created an introductory letter briefly describing the scope of the CADRA program along with survey instructions to explain the purpose of the survey and the need for respondents. The evaluation group collected survey responses from June 22, 2015 through July 22, 2015. A total of 238 survey responses were collected, and all responses were included in the analysis of data.

The survey consisted of 27 questions, 22 core questions and 5 demographic questions. The survey questions were designed to identify to which of the three target groups the respondents belonged, specific needs reported regarding data collection and analysis, satisfaction with

existing data collection and research tools, frequency of grant writing and desire for services offered through the CADRA program.

Demographic questions collected information on the respondents' age, race, sex, level of education, and employment status. The respondents' answer regarding which type of agency they worked for determined the following sequence of questions with which they would be presented. For example, if a respondent reported being employed by a nonprofit institution, they would see a subgroup of questions geared specifically toward the data collection and analysis needs of nonprofit agencies. Alpha Group received 238 total survey responses during the collection period.

The survey was promoted through an email announcement containing an electronic link to the survey along with instructions regarding the time commitment required, the purpose of the survey, and all potential respondents were provided with a contact from the evaluation team during the survey period. The contact (Amber Konold) received several emails containing feedback from respondents, most noting that the survey did not provide a comprehensive list of terminal degrees which made choosing a level of education difficult for respondents.

Survey responses were collected through Qualtrics, which resulted in viable data for analysis. The total number of respondents was 238, subgroup totals were: 153 (66%) from higher education institutions, 44 (19%) from nonprofit organizations other than higher education institutions, 23 (10%) from government agencies, 10 (4%) employed in the private sector, 1 (0%) retired, and 1 (0%) reported "other please specify" and noted that they were employed by the school district.

## Findings

### Qualitative Findings

For this study Alpha Group developed eleven (11) questions to ask during the qualitative interviews that would provide the most benefit in the evaluation of CADRA. Some of these questions such as Question #6 – Do you work with the nonprofit community? Proved to result in a common theme among the four programs interviewed; No, they do not. Below are each of the questions asked with a narrative:

1. How long has the program been in operation?

Each of the programs is at least 15 years old with these exception of the UC Berkeley D-Lab which opened its doors in 2013. This was expected as the team chose these programs for being well established and prestigious. That doesn't happen overnight as it takes time to establish a reputation of data integrity and is usually a result of years of data being cited. Princeton's DSS Lab was the oldest at over 50 years old.

2. What is your focus area? Who is your main audience?

Each of the programs had different foci and although some may cross paths, there didn't seem to be much, if any, duplication of effort. UC Berkeley's D-lab focuses on training, consulting, community building, computing infrastructure, and data. It also transmits this information to the Census Bureau. Princeton is internally focused on social science data and statistics. The University of Tennessee's State Data Center is focused on census data and its reporting. Penn State's NERCRD is focused on rural development and educating individuals in rural areas to create a shared vision for future sustainable communities; and the Minnesota Population Center is focused on social sciences, health, and data. As with UC Berkeley and the University of Tennessee, the MPC is also partnered with the Census Bureau.

3. Who are your internal and external stakeholders?

Most of the programs had a common answer and identified internal stakeholders as research faculty, students, and staff. The external stakeholders vary greatly based upon grant-funded research, and the current external stakeholders during the time of the interviews may not be the same stakeholders years down the road. As mentioned above, three of the programs cited the US Census Bureau.

4. How is the program funded?

The funding structure of each lab is in some way supplemented by long-term guaranteed funding such as by the University they belong to, or as a result of a strategic partnership with the federal government. The UC Berkeley D-Lab receives support from the Deans of the professional schools and academic departments. Princeton's DSS Lab is part of the regular library operations budget. The University of Tennessee is funded by the TN Department of Finance & Administration. Penn State's NERCRD's major core funding comes from the National Institute of Food and Agriculture (NIFA) and the region's land-grant universities; and MPC's projects are mostly funded by federal grants, however, some University of Minnesota funding comes from the Office of the Vice President for Research.

5. Do you provide assistance in the writing of grants?

This question received a mixed response. UC Berkeley's D-Lab provides training and workshops on the writing of grants towards specific funding sources such as the National Institutes of Health (NIH) and the National Science Foundation (NSF), however, they do not actually write or apply for the grants. Princeton and the University of Tennessee do not offer any assistance in grant writing. Penn State's NERCRD advertises that it does, however, they were unavailable for interview for further information as to how many per

year, and if that is a core mission area. The MPC is heavily involved with the assistance of writing program development grants for affiliated research and claimed to have written over thirty (30) in 2014, however, they could not answer as to how many were actually funded to quantify a success percentage.

6. Do you work with the nonprofit community?

Not one of the Data Labs claimed to have worked with the nonprofit community during the interviews, nor is it advertised as a core business process on any of their websites.

7. What is your program structure? How many staffers? Are they Salaried? Volunteers?

Graduate Assistants?

Each Data Lab varies in its size, with the smallest being Princeton's DSS Lab with three full time librarians, two full time statistical consultants, 1/2 full time support staff member, and a cumulative 40 hours of work put in by graduate assistants each week. The MPC has the largest structure with 168 research staff currently employed by grants, and 6-7 full time university funded employees. Taken from their website, Penn State's NERCRD's staff consists of one program director, four administrative staffers, two postdoctoral scholars, and five graduate assistants. The UC Berkeley D-Lab's staff consists of a faculty director (part-time), executive director (full-time), academic coordinator (part-time), data archivist (part-time), IT specialist (full-time), and applied software/tool developers (2 x part-time). They also employ graduate student and staff as consultants (approximately 15-20 per semester, 3-5 hours/week), workshop presenters (15-20 per semester), and GSR operational staff (usually 5-7 half-time). All are paid.

8. What methods are used to raise awareness of your program?

Since the major internal audience of many of these labs are the students, faculty, and staff, the University is commonly used for communication and raising awareness such as via email blasts, newsletters, and bulletins. Several labs said to have held workshops and consultations for the students and faculty to become more literate with their programs. There was also a common trend of updating their website and social media sites to try and reach the next generation of researchers, and participation in professional conferences.

9. How would you assess the data literacy in your community?

The response to data literacy varied depending on the university and the focus of the program. Some interpreted the community as the University and students, others interpreted it as the surrounding geographic area. In a future study, I would refine this question to be less ambiguous. There wasn't a right or wrong answer, however, the response is going to be subjective based upon the opinions of the individuals interviewed.

10. What advice or lessons learned would you give to a University beginning implementation of a Community Assessment and Data Analysis lab?

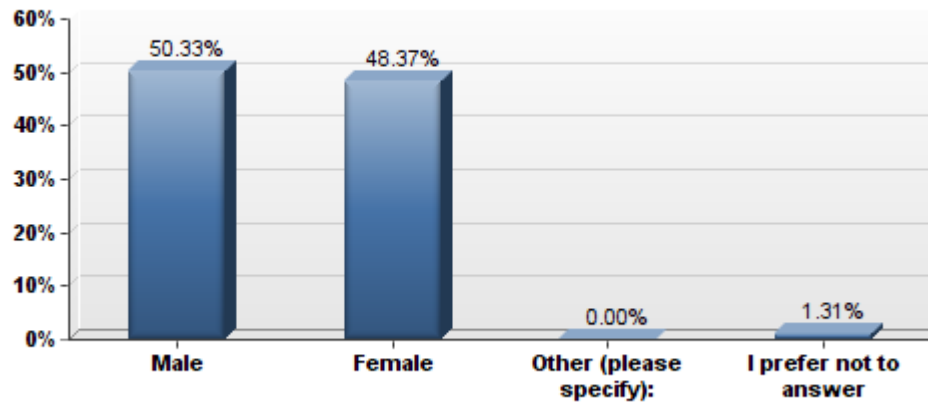
Discussed in the Lessons Learned section below.

11. How do you measure data needs and type of data needed?

The data labs interviewed detailed several methods to measure the data types and needs. In some cases it could be as easy as seeing what grants were received and querying the professional research staff, while others log requests for data that come in through their systems. The students and faculty can be worked with directly as subject matter experts of specific fields to learn what is out there, what is popular, and what is possible.

## Quantitative Findings

The following section includes graphs and visual representations from the quantitative data derived from the survey results from the three main target groups beginning with the demographic questions for each group, followed by the core questions for each.



## **Demographics**

### **1. Higher Education Institution**

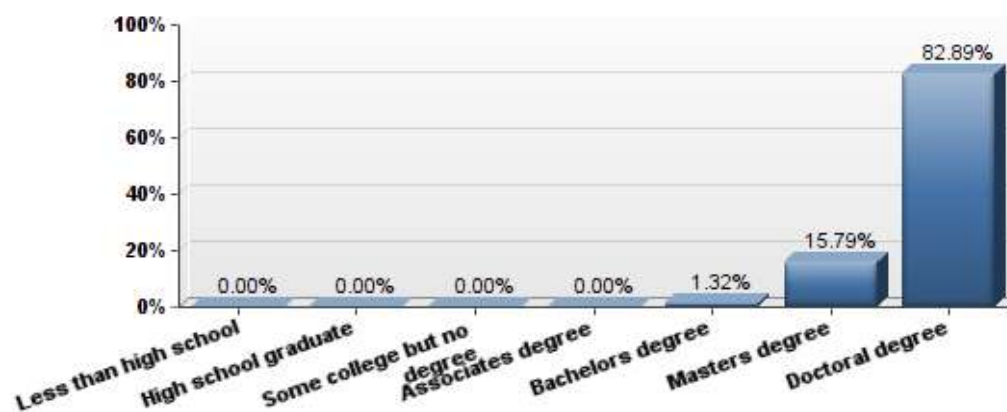
#### **Gender**

Answered: 153 Skipped: 0

The majority of survey respondents from higher education institutions were male (50.33%, 77), with 74 females (48.37%) responding to the survey and two individuals (1.31%) who preferred not to answer.

#### **What is your age?**

Answered: 153 Skipped: 0



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pondents from higher education institutions (27.63%, 42) indicated that they were between 40-49 years of age. The second largest percentage of respondents (23.68%, 36) reported age between 50-59 years. The smallest recorded age group was 21-29 years (3.29%), and there were no respondents under 20 years of age.

### What is the highest level of education you have completed?

Answered: 152 Skipped: 1

The majority of respondents (82.89%, 126) indicated they had completed a doctoral degree, while the remaining 17.11%, (26 respondents), indicated that they had completed an undergraduate degree or higher.

### What is your race?



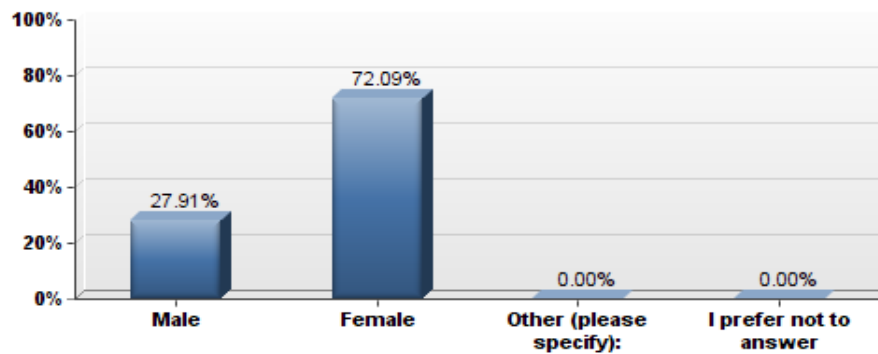
Answered: 153 Skipped: 0

The majority of respondents (83.55%, 127) indicated that they identified as White (non-Hispanic), respondents who identified as Asian made up the second largest group (6.58%, 10).

Those who responded “other race (please specify)” provided the following specifications:

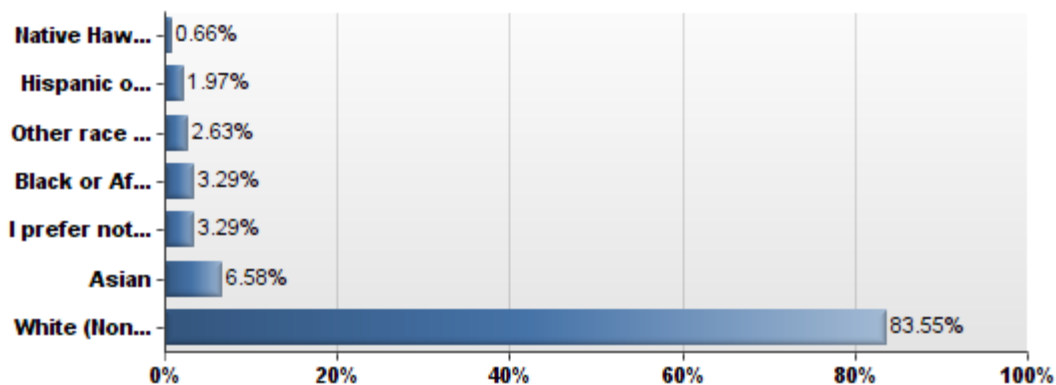
- West Indian-Jamaican
- Mixed
- American Indian
- Adopted with Native American mother, also adopted.

## 2. Nonprofit Organizations

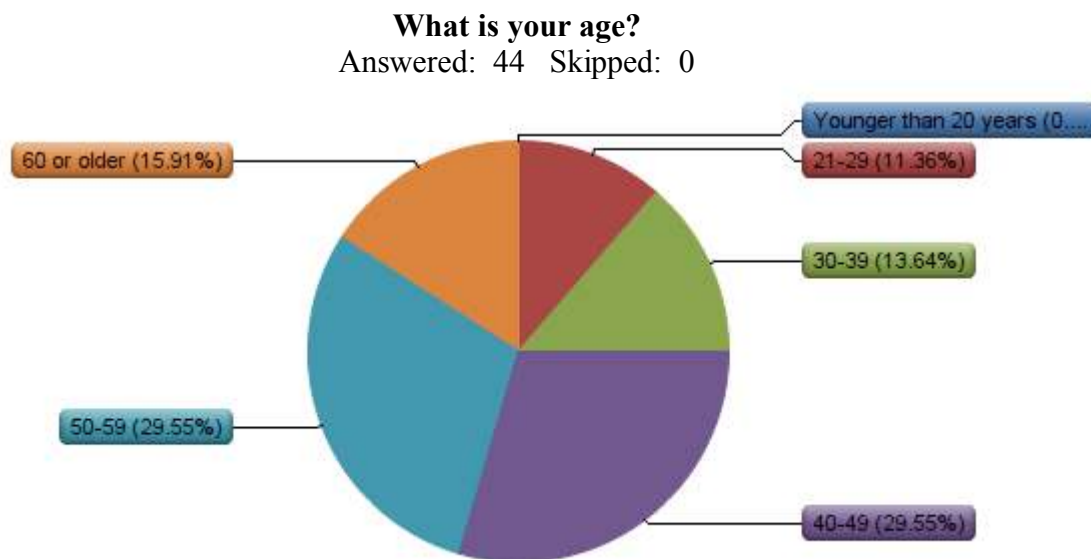


### Gender

Answered: 44 Skipped: 0



The majority of survey respondents from nonprofit organizations were female (72.09%), with 31 females responding to the survey and 12 males responding to the survey.

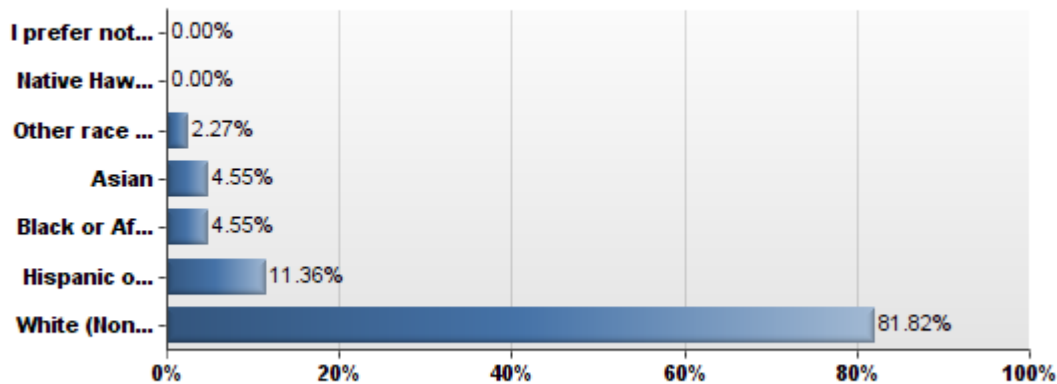


The majority of respondents from nonprofit organizations were split down the middle between ages 40-49 (29.55%, 13) and ages 50-59 (29.55%, 13). The second largest percentage of respondents (15.91%, 7) indicated that they were over 60 years of age. The smallest recorded age group was 21-29 years (11.36%, 5), and there were no respondents under 20 years of age.

**What is the highest level of education  
you have completed?**

Answered: 44 Skipped: 0

The majority of respondents (45.45%, 20) indicated they had completed a master's degree, while the second largest group (27.27%, 12) reported having a bachelor's degree. In total, 97.73% indicated having attended college, with the remaining 2.27%, (1), indicating that they

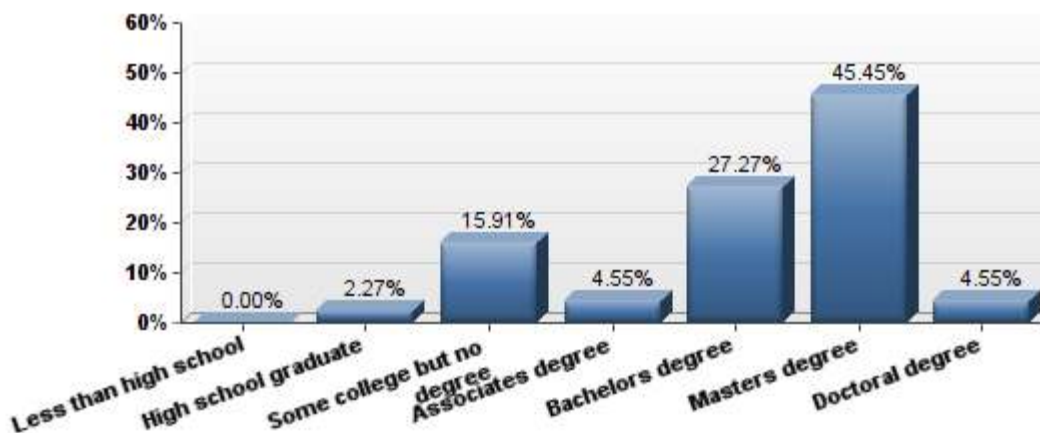


were high school graduates with no college.

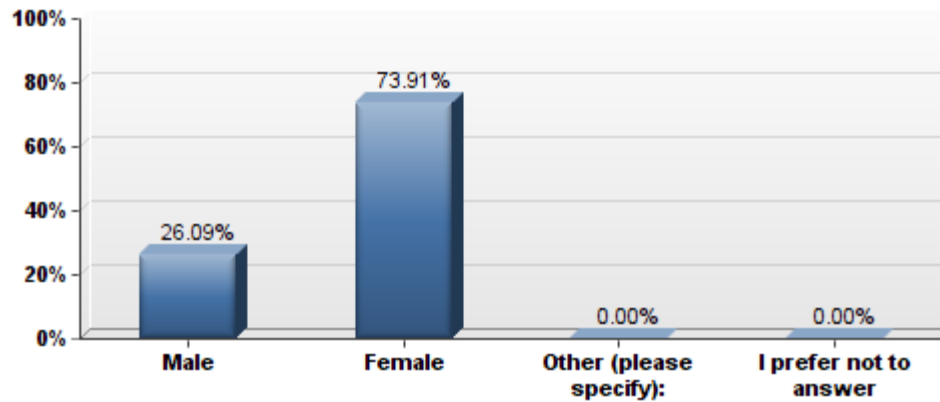
#### What is your race?

Answered: 44 Skipped: 0

The majority of respondents (81.82%, 36) indicated that they identified as White (non-



Hispanic), respondents who identified as Hispanic or Latino made up the second largest group (11.36%, 5). The third largest group was split down the middle with respondents identifying as



Black or African American (4.55%, 2) and Asian (4.55%, 2). The respondent who indicated “other race (please specify)” provided the following specification: White/Native American.

### 3. Public Sector Employees

While the total number of respondents from this subgroup is not large enough from which to draw any definitive conclusions, Alpha Group thought it would be of interest to the CADRA Program to include the resulting information from the public sector response to the survey questions.

#### Gender

Answered: 23 Skipped: 0

The majority of survey respondents from the public sector were female (73.91%), with 17 females responding to the survey and 6 males responding to the survey.

#### What is your age?

Answered: 23 Skipped: 0

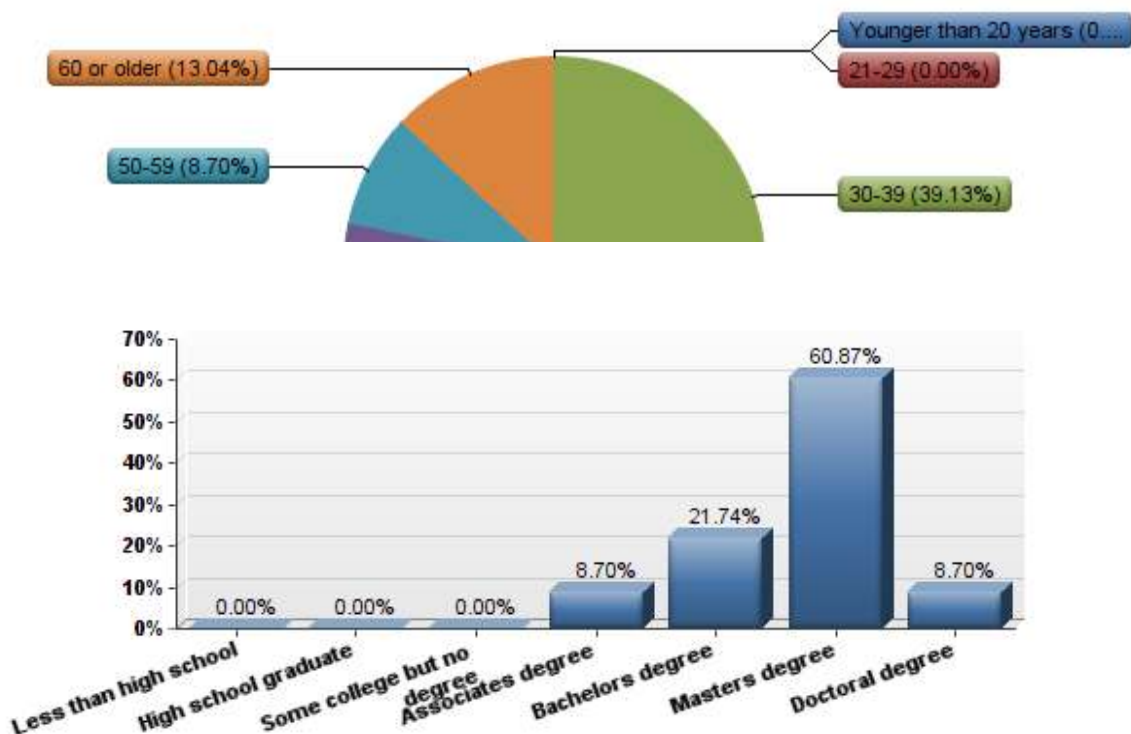
The majority of respondents from the public sector were split down the middle between ages 30-39 (39.19%, 9) and ages 40-49 (39.15%, 9). The second largest percentage of respondents (13.04%, 3) indicated that they were over 60 years of age. The smallest recorded age group was 50-59 years (8.70%, 2), and there were no respondents 29 years of age or younger.

**What is the highest level of education you have completed?**

Answered: 23 Skipped: 0

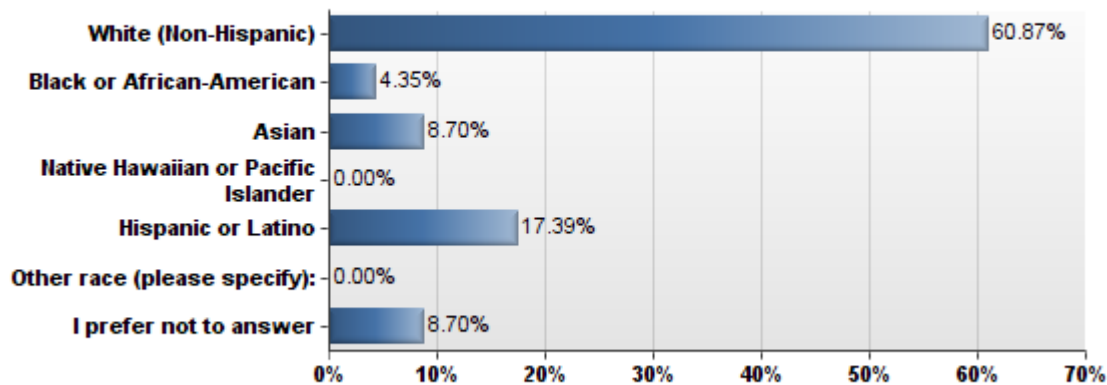
Overall, 14 respondents (60.87%) indicated they had completed a master's degree, while 5 respondents (21.74%) reported having a bachelor's degree. In total, all 23 respondents (100%) indicated having attained some level of college degree.

**What is your race?**



Answered: 23 Skipped: 0

Overall, the majority of respondents (60.87%, 14) indicated that they identified as White (non-Hispanic), respondents who identified as Hispanic or Latino made up the second largest group (17.39%, 4). The third largest group was split down the middle with respondents identifying as Asian (8.70%, 2) and with respondents who would prefer not to answer (8.70%,



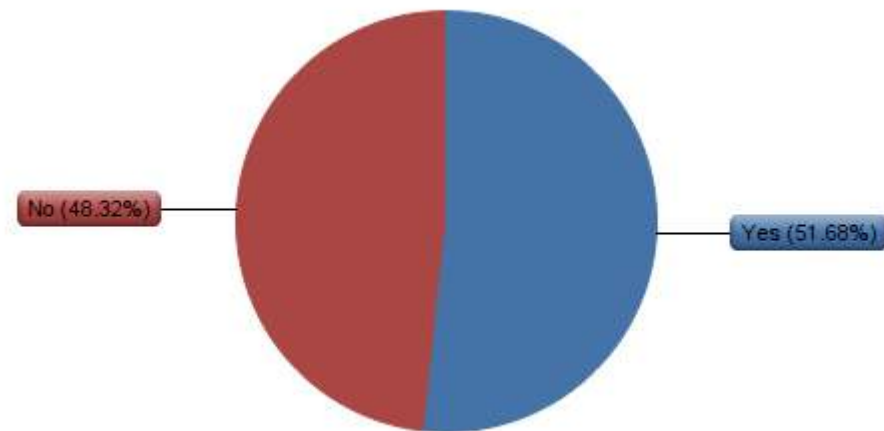
2). One respondent (4.35%) indicated that they identified as Black or African-American.

## Core Questions

### 1. Higher Education Institutions

**Do you or your organization  
collect community data?**

Answered: 149 Skipped: 4



The majority of respondents (51.68%, 77) indicated that they or their organization does collect data, while 48.32%, 72 respondents replied no to the question. When asked what type of data they collected, an open ended comment section revealed the following responses:

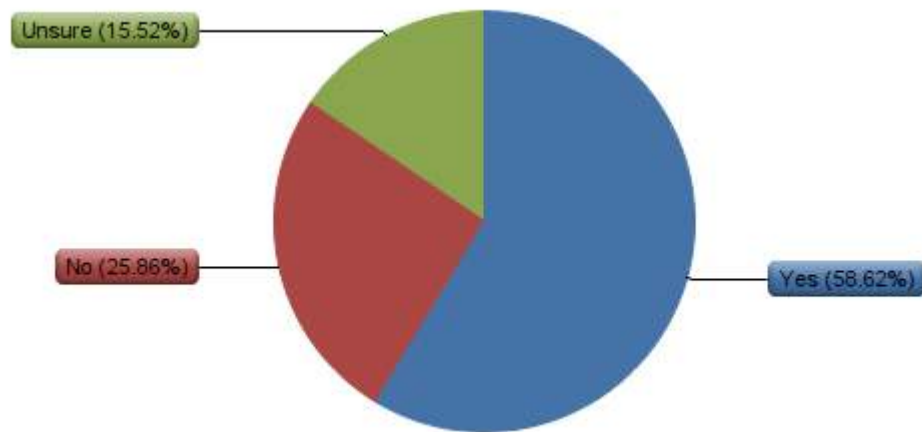
- Economic performance data for state and local regions
- Public health-related data
- Socioeconomic data
- Survey data
- Demographic data
- K-12 education data (spending, demographics, student performance, etc.)
- Program evaluation data and assessment standards
- Census data and historical records

When asked what the collected data is utilized for, in an open-ended comment section we received the following responses:

- Unspecified research
- Program development, intervention
- Program evaluation
- Performance improvement
- Journal and report writing
- testing hypotheses, building models and validating theories (if not capable of falsifying yet)
- Don't know

**Does your organization share data  
with the broader community?**

Answered: 58 Skipped: 95

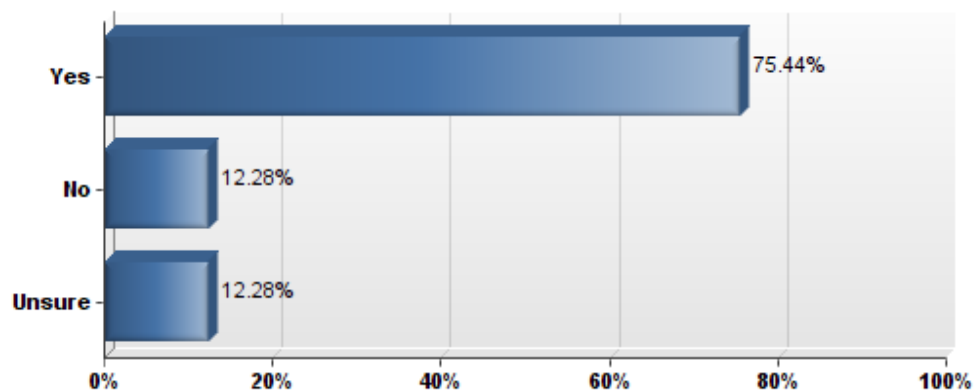


When asked if the collected data is shared with the community, the majority of respondents (58.62%, 34) replied that yes, data is shared. 25.86% of respondents, (15), said no, they do not share data with the community, and 15.52% of respondents, (9), were unsure.

**Do you or your organization analyze data  
using statistical tools?**



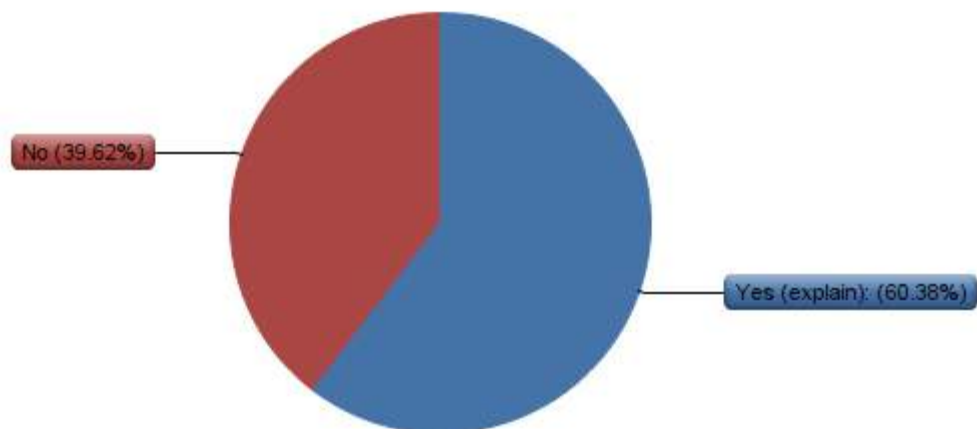
Answered: 57 Skipped: 96



In regard to whether respondents or their organizations use statistical tools to analyze data, the vast majority of responses (75.44%, 43) indicated that they do use statistical tools, whereas the remaining 24.56% was split down the middle with respondents claiming that either they do not use statistical tools (12.28%, 7), or they are unsure (12.28%, 7).

**Are there any gaps or deficiencies in your data collection and/or analysis methods that you would like to see improved upon?**

Answered: 53 Skipped: 100



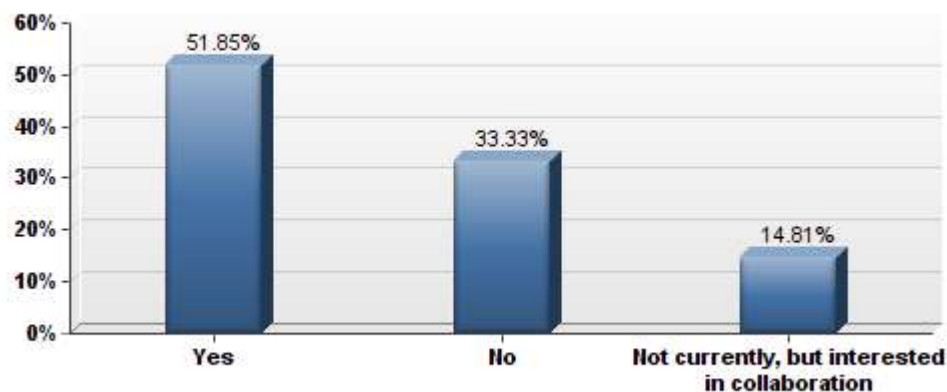
When asked if they have any deficiencies in their data collection and/or analysis methods that they would like to see improved upon, the majority (60.38%, 32) said yes, while 39.62%, (21), responded that they were happy with their data collection and/or analysis methods.

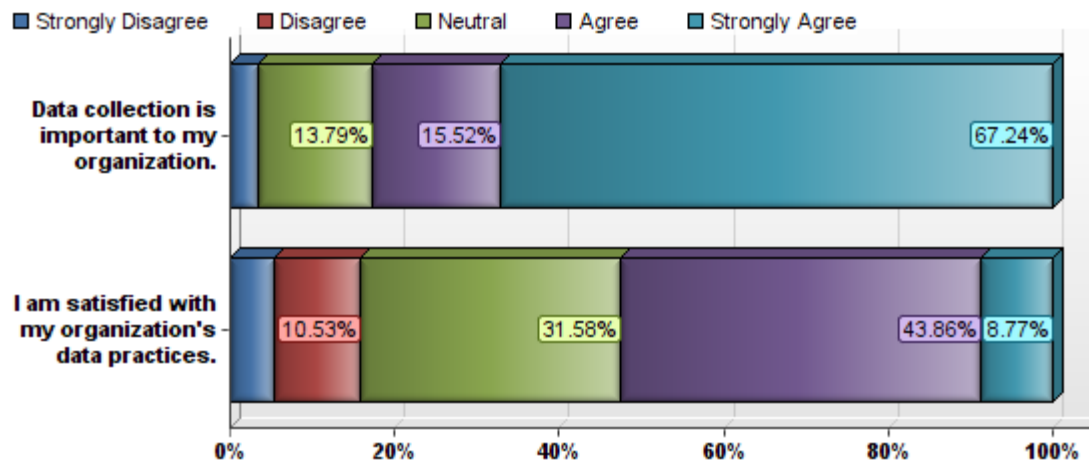
Respondents who indicated yes offered the following explanations:

- Need to have data warehouse for local regions
- Sometimes school district will not share data
- Data collection lacks comprehensive detail
- Need for analytical tools and expert support (especially for statistics)
- We have no plan for who is collecting data for which purpose and how to apply metadata to it to make it discoverable.
- Collection/analysis seems random
- We need to learn how to do principle component analysis
- High quality data is sometimes difficult to collect
- We are beginning to explore systems mapping and are looking for tools to help with that
- We could use training on analysis, planning phase of assessment

**Does your organization currently collaborate for community data collection and analysis with other nonprofit or community organizations?**

Answered: 53 Skipped: 100





The majority (51.85%, 28) of respondents from higher education institutions indicated that they do collaborate with other nonprofit or community organizations for data collection. While 33.33%, (18), indicated that they do not collaborate, 14.81%, (8), indicated that they do not currently collaborate but are interested in future collaboration.

#### Satisfaction with Data Collection

Answered: 115 Skipped: 38

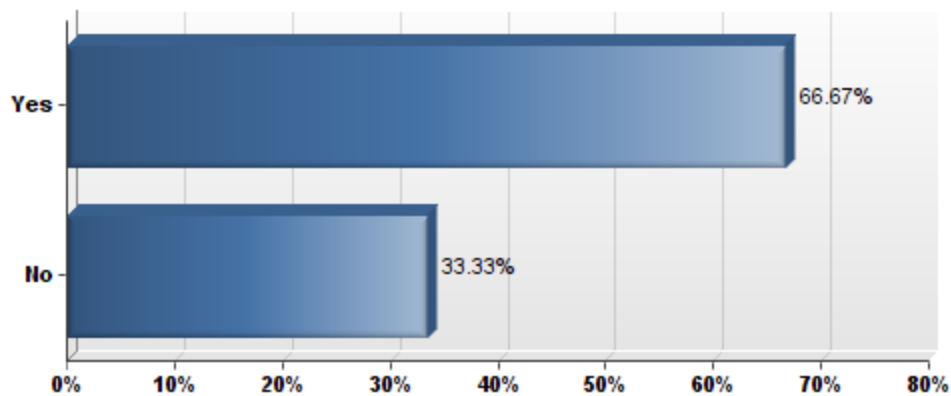
While most of the respondents from higher education institutions (67.24%, 58) reported that they strongly agree that data collection is important to their organization, only 8.77%, (5), said that they **strongly agree** that they are satisfied with their organization's data practices. Most of the responses (43.86%, 25) indicate that respondents report that they only **agree** that they are satisfied with their organization's data practices.

**Would you or your organization be interested in outside assistance with data collection and analysis?**

Answered: 119 Skipped: 34

Though responses were closely split, the majority of respondents (52.94%, 63) indicated that they would be interested in outside assistance with data collection and analysis whereas 47.06%, or 56, of respondents indicated that they would not be interested in assistance.

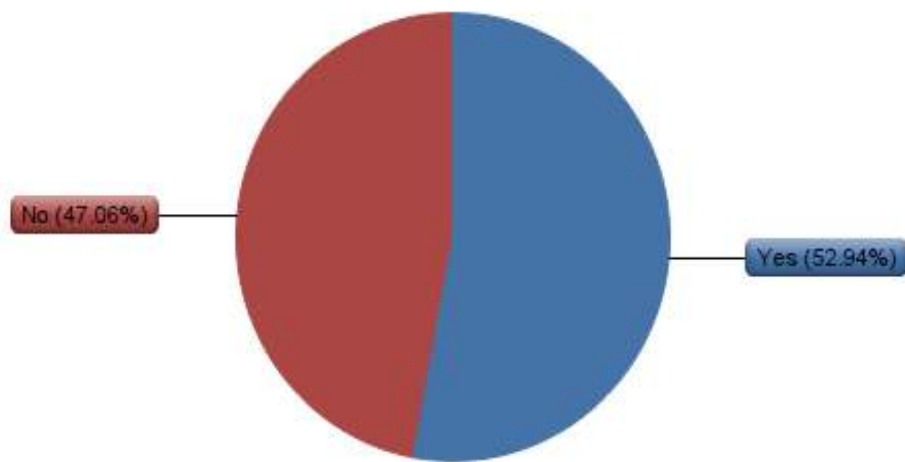
**Would you or your organization benefit from a center that provides a single**



**repository for data across several focus areas within the community?**

Answered: 120 Skipped: 33

Most respondents from higher education institutions (66.67%, 80) agree that their organization would benefit from a single repository for community data.

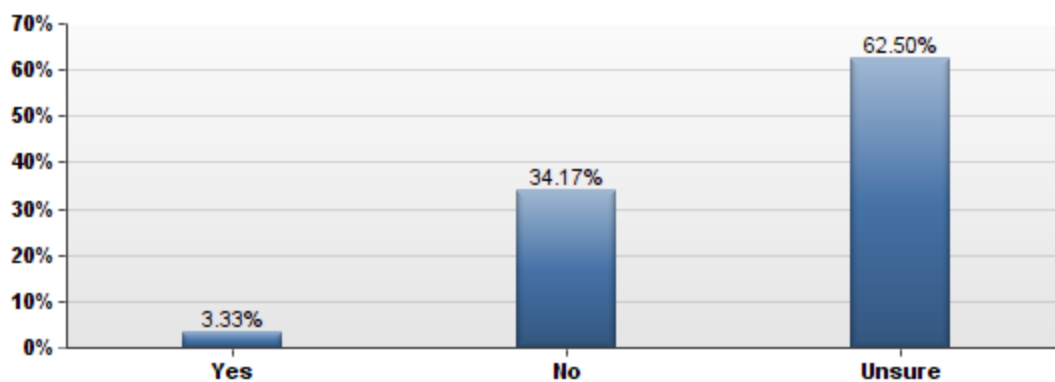


**Would you or your organization be willing to contribute a small amount of funds to create and maintain a central data repository?**

Answered: 120 Skipped: 33

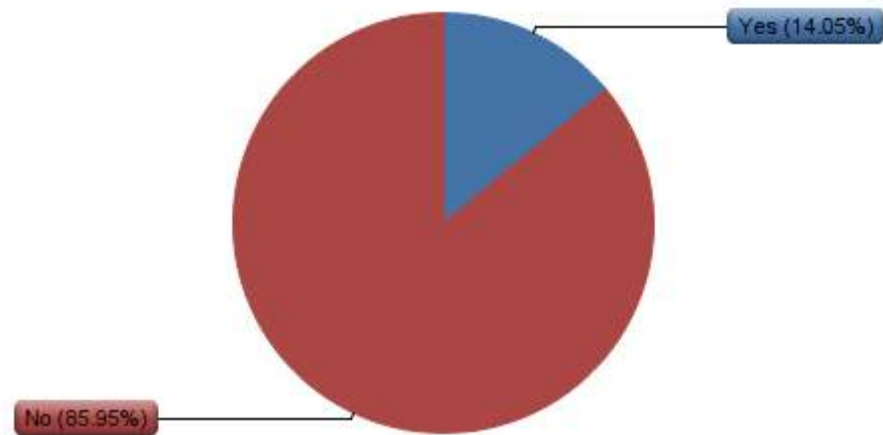
It is interesting to note that although 66.67%, (80), of respondents indicated their organizations would benefit from a single community data repository, only 3.33%, or 4 respondents reported that they would be willing to pay a small amount of funding for the creation and maintenance per the graph below.

**Are you or your organization familiar with the data collection and analysis services offered by the Community Advanced Data & Research Analysis (CADRA) Lab of UNLV?**



Answered: 121 Skipped: 32

Though previously 66.67%, (80), of respondents claimed their organizations would benefit from a single repository for community data, only 14.05%, (17), of responses from higher education institutions indicate that they are familiar with the services offered by the CADRA Lab of UNLV.

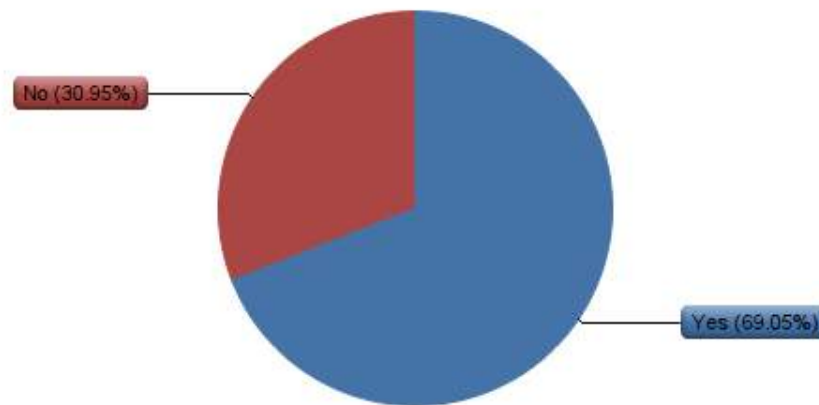


## 2. Nonprofit Organizations

**Do you or your organization  
collect community data?**

Answered: 42 Skipped: 2

The majority of respondents (69.05%, 29) indicated that they or their organization does collect data, while 30.95%, (13), responded no to the question. When asked what type of data they collected, an open ended comment section revealed the following responses:



- Socioeconomic data
- Student specific data
- Health & Education data
- Program satisfaction
- Regional demographic information
- Program usage data
- Quantitative data

When asked what the collected data is utilized for, in an open-ended comment section we received the following responses:

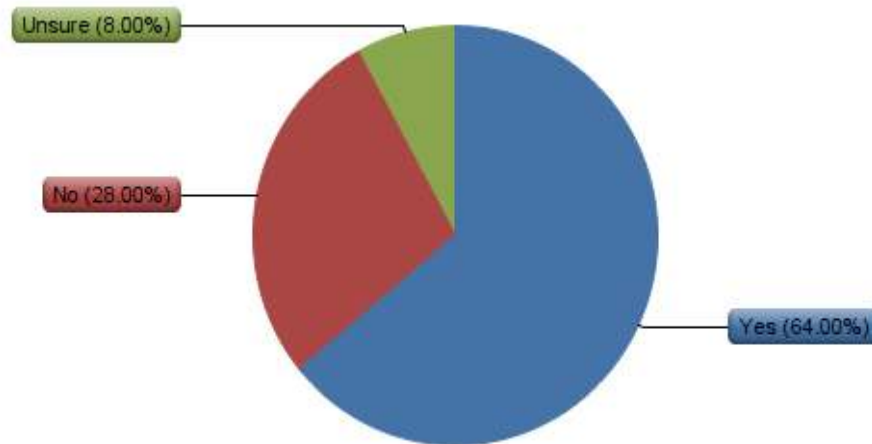
- Recruitment
- Program impact analysis
- Program planning & improvement
- Grant writing and reporting
- Grant applications
- Benchmarking
- Program evaluation
- Fundraising

- Strategic Planning
- Analysis of community impact

**Does your organization share data with the broader community?**

Answered: 25 Skipped: 19

When asked if the collected data is shared with the community, the majority of



respondents from nonprofit organizations (64.00%, 16) relied that yes, data is shared. 28.00%, (7), of respondents said no, they do not share data with the community, and 8%, (2), of respondents were unsure.

**Do you or your organization analyze data using statistical tools?**

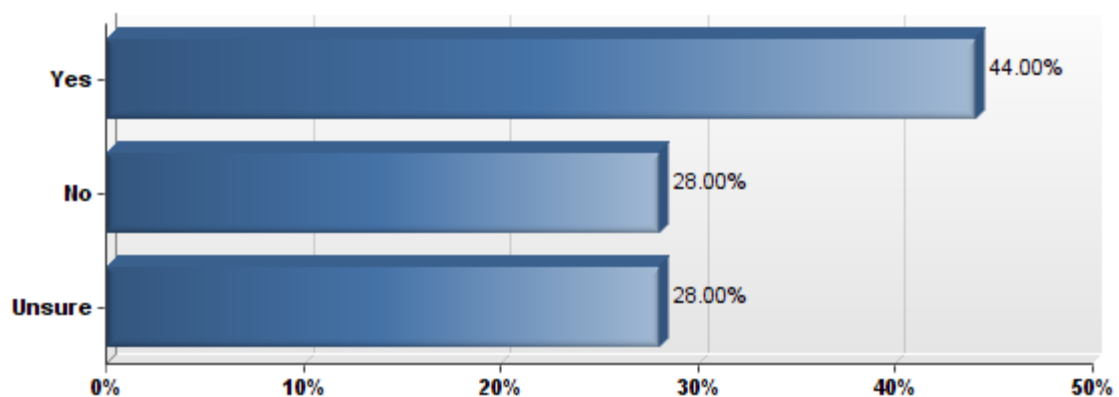
Answered: 25 Skipped: 19

In regard to whether respondents or their organizations use statistical tools to analyze

data,

the

vast



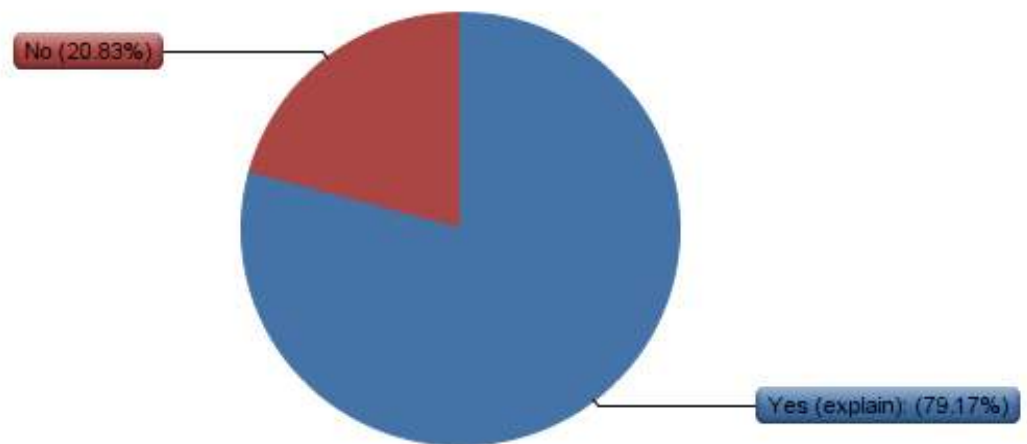


majority of responses (44.00%, 11) indicated that they do use statistical tools, whereas the remaining respondents are split, reporting that 28%, (7) respondents, do not use statistical tools and 28%, (7) respondents, are unsure.

**Are there any gaps or deficiencies in your data collection and/or analysis methods that you would like to see improved upon?**

Answered: 24 Skipped: 20

When asked if they have any deficiencies in their data collection and/or analysis methods

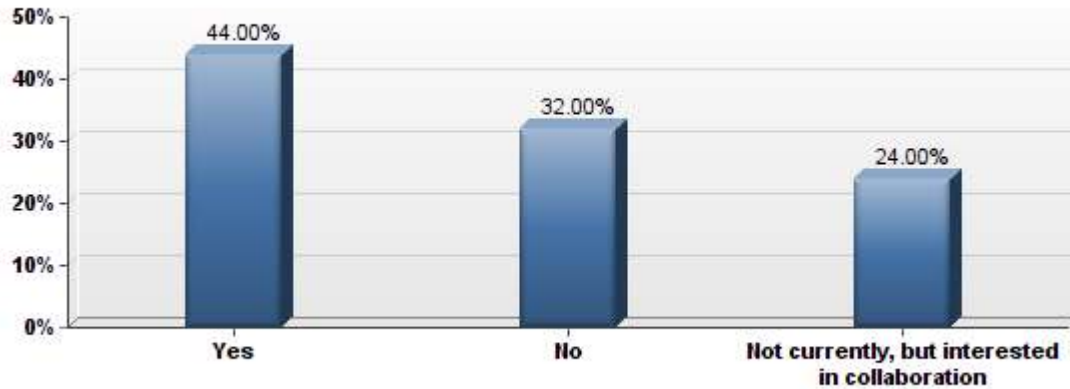


that they would like to see improved upon, the majority (79.17%, 19) said yes, while 20.83%, (5), responded that they were happy with their data collection and/or analysis methods.

Respondents who indicated yes offered the following explanations:

- Data hygiene & communication between multiple databases
- Need better data collection tools
- The use of statistical tools for measuring outcomes
- Data is not always up-to-date
- Lack of training – we are not using our data or data systems to the fullest
- Up-to-date comparative demographic information would be valuable as would survey support

- Capability to query blind data for meaningful statistics



**Does your organization currently collaborate for community data collection and analysis with other nonprofit or community organizations?**

Answered: 25 Skipped: 19

The majority (44.00%, 11) of respondents from nonprofit organizations indicated that they do collaborate with other nonprofit or community organizations for data collection. While 32.00%, 8 respondents indicated that they do not collaborate, 24.00% (6 respondents), indicated that they do not currently collaborate but are interested in future collaboration.

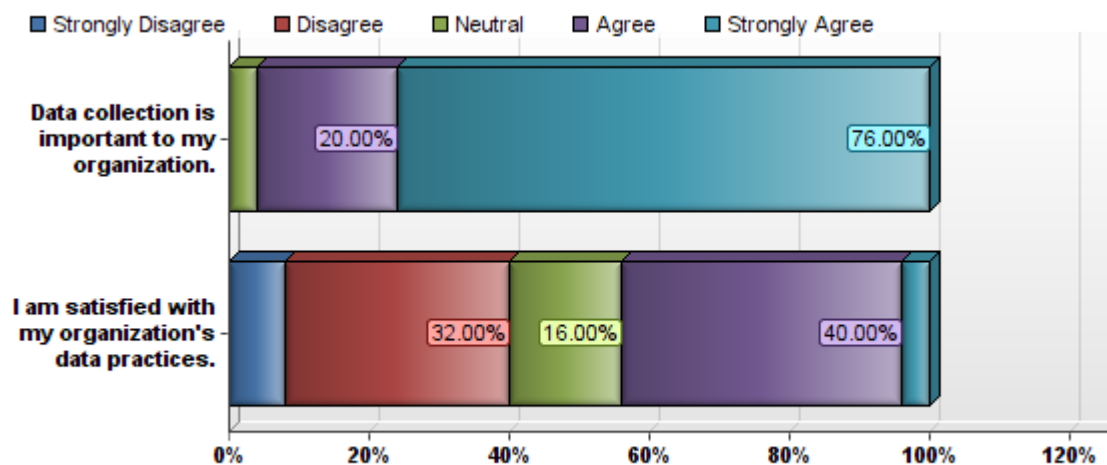
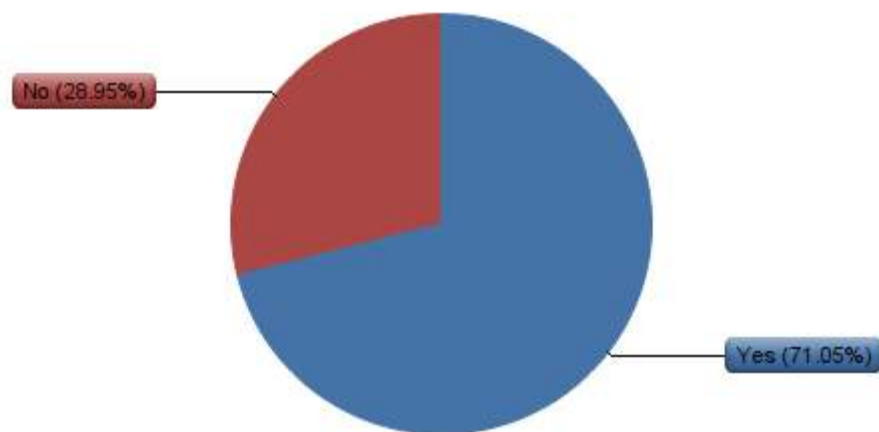
**Satisfaction with Data Collection**

Answered: 25 Skipped: 19

While most of the respondents from nonprofit organizations (76.00%, 19) reported that they strongly agree that data collection is important to their organization, only 4%, (1 respondent), said that they **strongly agree** that they are satisfied with their organization's data practices. Most of the responses (40.00%, 10) indicate that respondents report that they only **agree** that they are satisfied with their organization's data practices.

**Would you or your organization be interested in outside assistance with data collection and analysis?**

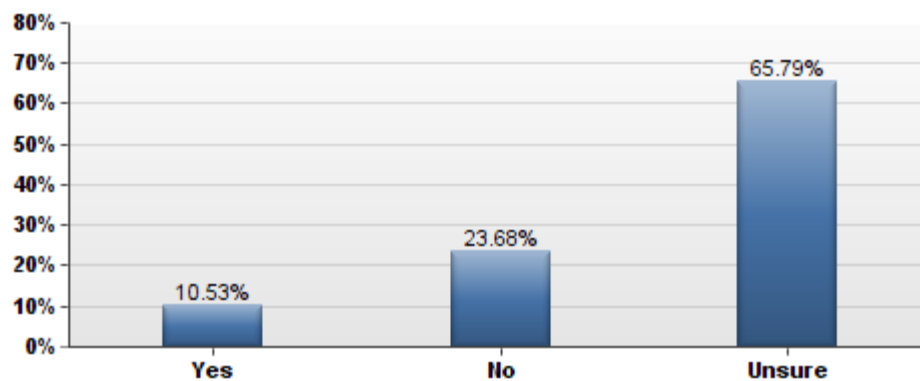
Answered: 38 Skipped: 6



The majority of respondents (71.05%, 27) indicated that they would be interested in outside assistance with data collection and analysis whereas 28.95% or 11 respondents indicated that they would not be interested in assistance.

**Would you or your organization benefit from a center that provides a single repository for data across several focus areas within the community?**

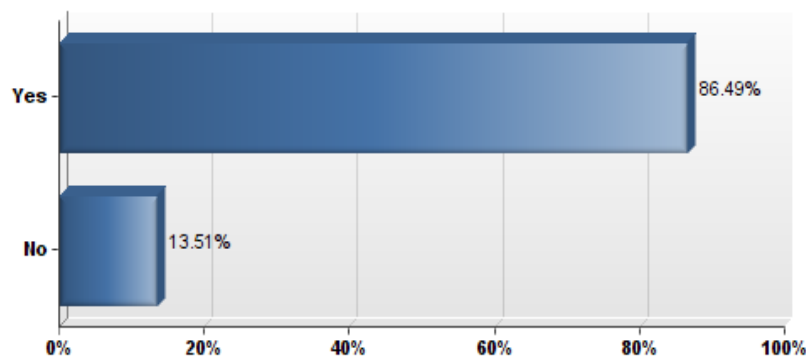
Answered: 37 Skipped: 7



Most respondents from nonprofit organizations (86.49%, 32) agree that their organization would benefit from a single repository for community data. Only 13.51%, or 5, respondents indicated that they would not benefit from a repository.

**Would you or your organization be willing to contribute a small amount of funds to create and maintain a central data repository?**

Answered: 38 Skipped: 6



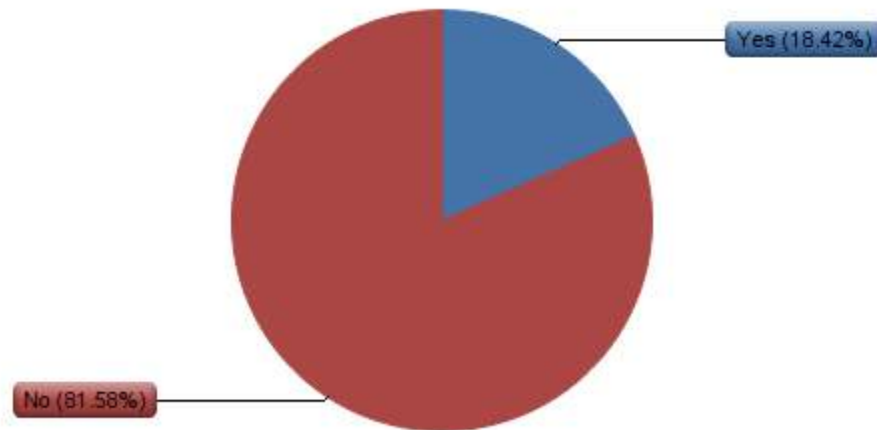
to

It is  
interesting  
note that  
although  
86.49% of

respondents indicated their organizations would benefit from a single community data repository, 10.53%, (4), reported that they would be willing to pay a small amount of funding for the creation and maintenance per the graph below. The majority of respondents (65.79%, 25) indicated that they were unsure if they or their organizations would be willing to pay a small amount to create and maintain a repository.

**Are you or your organization familiar with the data collection and analysis services offered by the Community Advanced Data & Research Analysis (CADRA) Lab of UNLV?**

Answered: 38 Skipped: 6



Though previously 86.49% of respondents claimed their organizations would benefit from a single repository for community data, only 18.42%, or 7 responses from nonprofit organizations indicate that they are familiar with the services offered by the CADRA Lab of UNLV.

### 3. Public Sector Employees

#### **Do you or your organization collect community data?**

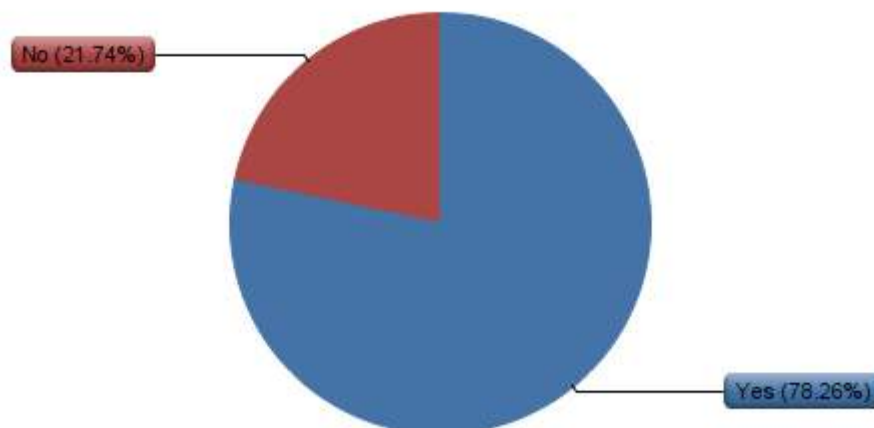
Answered: 23 Skipped: 0

Overall the majority of respondents (78.26%, 18) indicated that they or their organization does collect data, while 5 respondents (21.74%) reported no to the question. When asked what type of data they collected, an open ended comment section revealed the following responses:

- Socioeconomic data
- Education-specific data
- Health & Injury data
- Qualitative and Quantitative level data
- Community demographic data
- Student achievement data
- Statistical data
- Consumer demographics
- Demographic data (all types)

When asked what the collected data is utilized for, in an open-ended comment section we received the following responses:

- To inform policy development
- For budgeting, expenses, resource allocation
- To develop and evaluate programs
- To identify needs of students/families attending CCSD at-risk schools
- Grant applications



- To determine fair allocation of resources
- Statewide case management system
- Track program participants
- To develop funding formula for family resource centers
- Strategic decision making

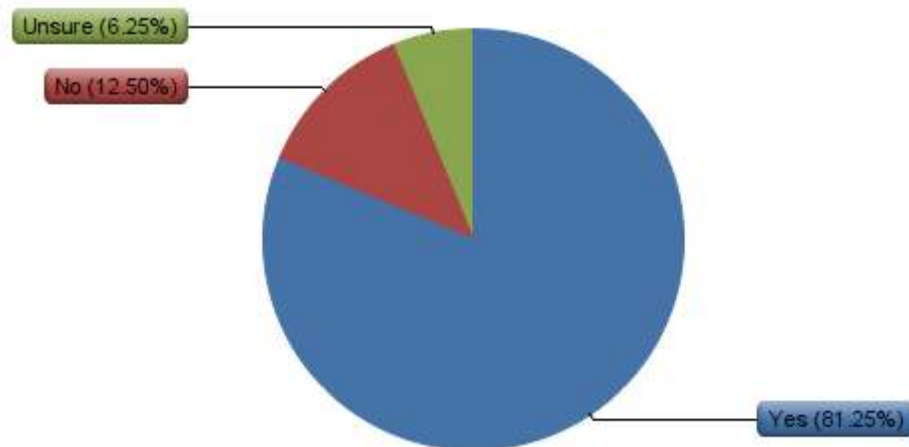
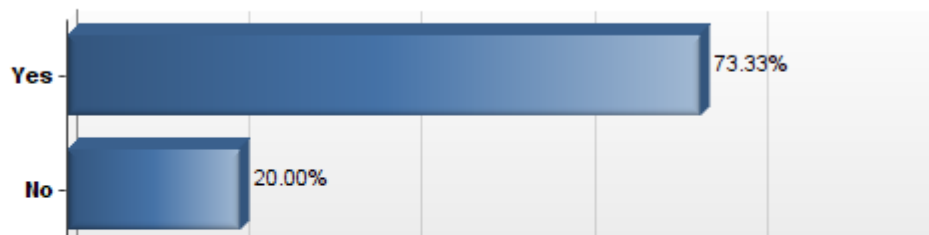
**Does your organization share data with the broader community?**

Answered: 16 Skipped: 7

When asked if the collected data is shared with the community, the majority of respondents from the public sector (81.25%, 13) replied that yes, data is shared. Two respondents (12.50%) said no, they do not share data with the community, and one respondent (6.25%) were unsure.

**Do you or your organization analyze data using statistical tools?**

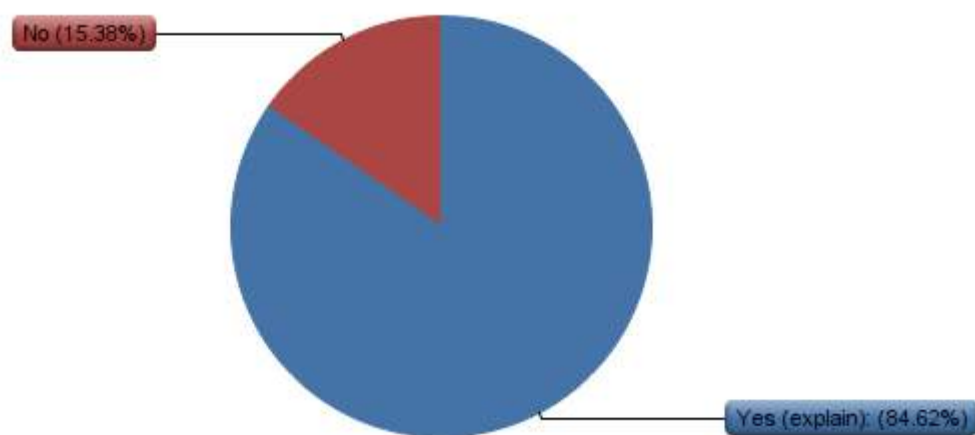
Answered: 15 Skipped: 8



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to whether respondents or their organizations use statistical tools to analyze data, the vast majority of responses (73.33%, 11) indicated that they do use statistical tools, whereas 3 respondents (20.00%) do not use statistical tools and 1 respondent (6.67%) was unsure.

**Are there any gaps or deficiencies in your data collection and/or analysis methods that you would like to see improved upon?**  
Answered: 13 Skipped: 10



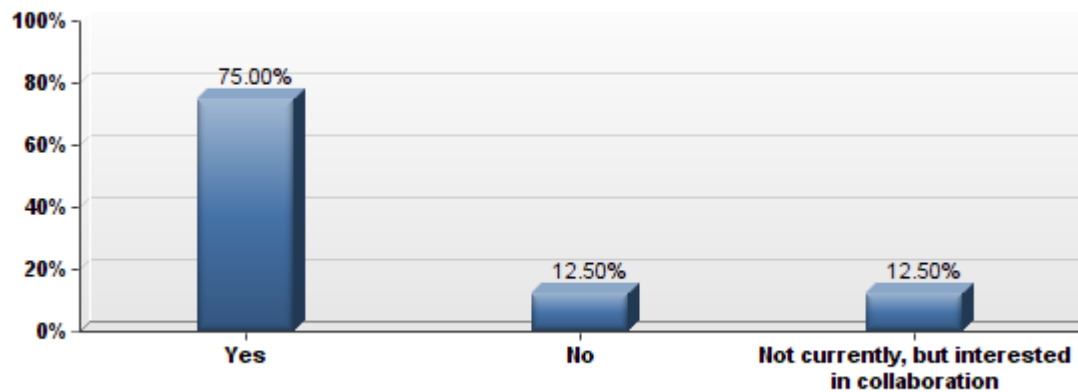
When asked if they have any deficiencies in their data collection and/or analysis methods that they would like to see improved upon, the majority of respondents (84.62%, 11) said yes, while 3 (15.38%) responded that they were happy with their data collection and/or analysis methods.

Respondents who indicated yes offered the following explanations:

- More collection/analysis on the value of services offered



- Need more complete data



- Need data sharing agreements
- Usually data is out-of-date
- Need to collect cleaner data, improve data governance of collected data
- Improve storage of data through data warehousing
- Need increased access to outside data

**Does your organization currently collaborate for community data collection and analysis with other nonprofit or community organizations?**

Answered: 16 Skipped: 7

The majority (75.00%, 12) of respondents from the public sector indicated that they do collaborate with other nonprofit or community organizations for data collection. The remainder

of respondents were divided with 2 (12.50%) indicating that they do not collaborate, and 2 (12.50%) indicating that they do not currently collaborate but are interested in future collaboration.

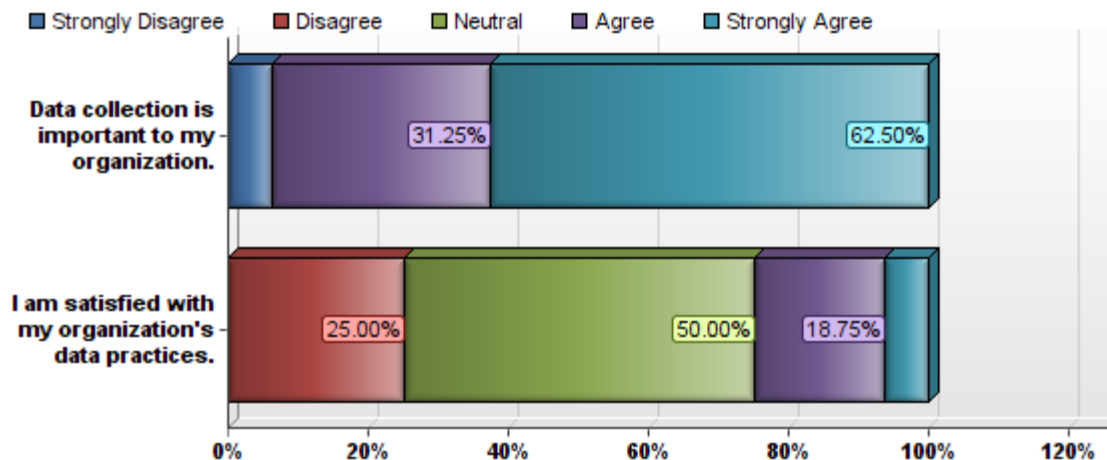
### Satisfaction with Data Collection

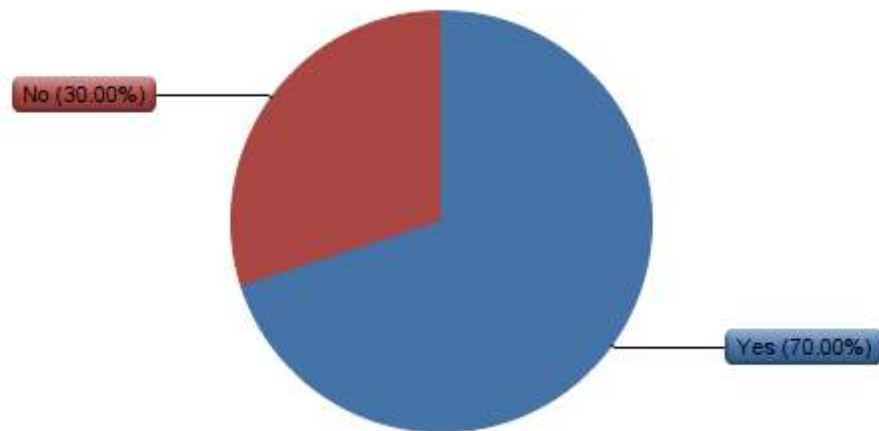
Answered: 23 Skipped: 0

While most of the respondents from the public sector (62.50%, 16) reported that they strongly agree that data collection is important to their organization, only 1 respondent (6.25%) said that they **strongly agree** that they are satisfied with their organization's data practices. Most of the responses (50.00%, 8) indicate that respondents report that they only **agree** that they are satisfied with their organization's data practices.

### Would you or your organization be interested in outside assistance with data collection and analysis?

Answered: 20 Skipped: 3





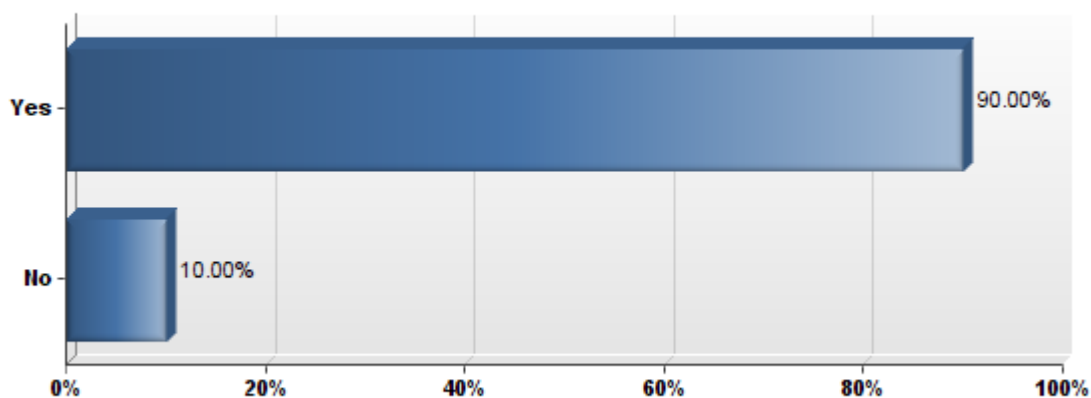
The majority of respondents (70.00%, 14) indicated that they would be interested in outside assistance with data collection and analysis whereas 6 respondents (30.00%) indicated that they would not be interested in assistance.

**Would you or your organization benefit from a center that provides a single repository for data across several focus areas within the community?**

Answered: 20 Skipped: 3

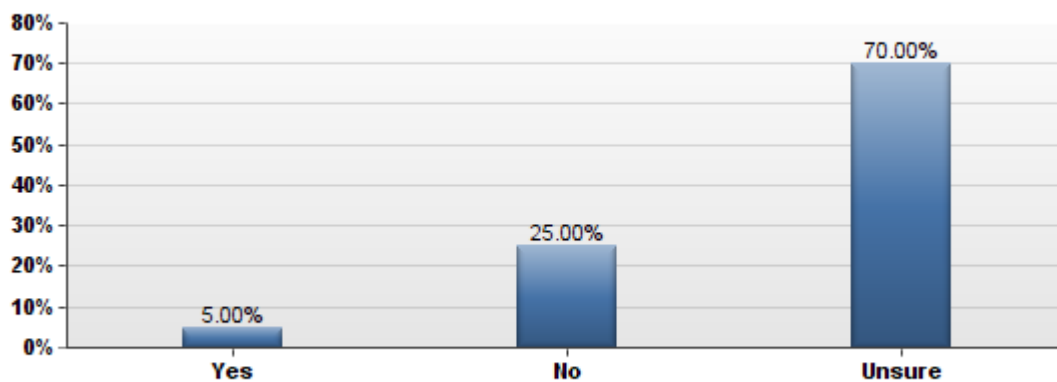
Most respondents from the public sector (90.00%, 18) agree that their organization would benefit from a single repository for community data. Only 2 respondents (10.00%) indicated that they would not benefit from a repository.

**Would you or your organization be willing to contribute a small amount of funds to create and maintain a central data repository?**



Answered: 20 Skipped: 3

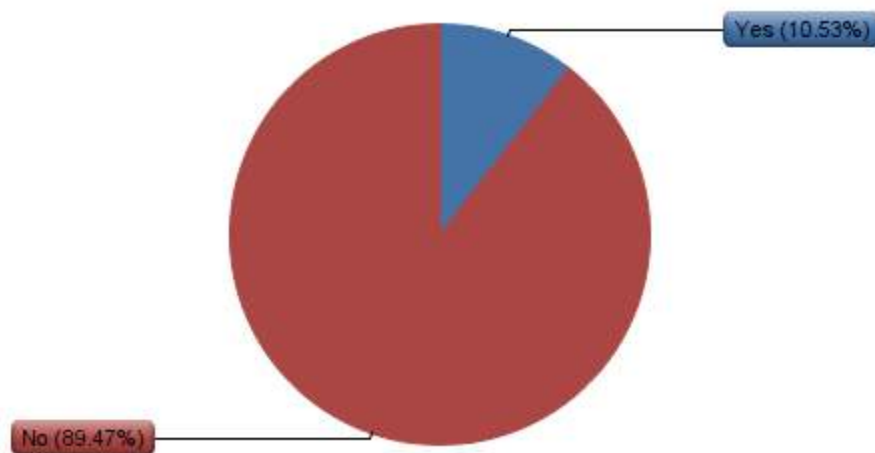
It is interesting to note that although 90.00% of respondents indicated their organizations would benefit from a single community data repository, only 1 respondent (5.00%) reported that they would be willing to pay a small amount of funding for the creation and maintenance per the graph below. The majority of respondents (70.00%, 14) indicated that they were unsure if they



or their organizations would be willing to pay a small amount to create and maintain a repository.

**Are you or your organization familiar with the data collection and analysis services offered by the Community Advanced Data & Research Analysis (CADRA) Lab of UNLV?**

Answered: 19 Skipped: 4



Though previously 90.00% of respondents claimed their organizations would benefit from a single repository for community data, only 2 responses from the public sector (10.53%) indicate that they are familiar with the services offered by the CADRA Lab of UNLV.

### Recommendations

The systematic program evaluation yielded several significant findings that may help CADRA improve its process and efficiency. Results of both the survey and benchmark analysis indicated that the three primary focuses of CADRA should be on: social networking amongst the primary stakeholder groups, implementation as the local data clearinghouse for Nevada, as well as, establishment of a long-term funding resource. The following recommendations will be provided in a timeline of three different groupings offered in short-range (1-3 years), medium-range (3-5 years), and long-range (greater than 5 years) recommendations. This is done in an effort to provide the most depth and breath to our advices.

#### **Short-Range Recommendations**

As results from both the survey data and benchmark analysis directly indicate, collaboration will be the most significant thing that CADRA could do in the coming one to two years. Predictably, the qualitative survey results for higher education institutions indicated that

over half of the respondents were either currently collaborating or were interested in collaborating for greater community data collection and analysis. These results should undoubtedly guide CADRA into building partnerships within the different UNLV School's and Departments where CADRA could eventually become the central hub within UNLV for researchers to monitor their necessary socioeconomic data. This is an imperative action, as one of the program options and benefits first identified by CADRA is community data mining.

Initially, CADRA should focus their efforts on relationship building and advocating for faculty research support by demonstrating the advantages and potential for monitoring community data levels. This is especially beneficial as UNLV seeks to achieve Tier 1 research status. CADRA should focus on the student and faculty researchers at UNLV and use their tangible products as an advertisement that will ultimately raise awareness of CADRA and can later market to the nonprofit community. Furthermore, through increased scholarly published articles and citations, CADRA's reputation will grow thereby increasing its overall awareness.

To support this, Dr. Jon Stile of the UC Berkeley D-Lab offered the following recommendation during his qualitative interview:

Build partnerships with faculty and listen to their needs. Rely on graduate students heavily – they are more in tune with needs and frustrations, they are eager to help other graduate students, they bring lots of energy, and they have networks you can use for offering and building services around. Don't reinvent wheels – collaborate with campus partners. Build in feedback and evaluation mechanisms while building your program. Create buzz, but try not to over-promise. Accept failures, learn, cut your losses and move on. (personal communication, July 09, 2015)

As a second recommendation, CADRA should focus on fostering a place where nonprofit organizations, public sector departments, and higher education researchers can network for the greater good of data obtainability. As the qualitative survey results indicated, there is both a need or desire in the Las Vegas community amongst all three of the targeted survey groups for an increased collaboration for community data collection, while all of the groups similarly noted that they had gaps or deficiencies in their data collection or analysis methods. Ultimately, CADRA has the ability to be a nexus point where professionals of various levels seeking various objectives can come together for the greater good of research, data accessibility, and data analysis. Moreover, a particularly useful benefit of the CADRA lab that must be advocated will be, program development and grant writing benefits.

Although marketable to the NPO's and community stakeholder groups, it is imperative that CADRA lab connects with faculty to communicate their ability to develop programs that have real world employability and applicability for UNLV students. CADRA Lab should consider hosting data workshops for the various colleges and departments throughout the University to inquire about their support for the lab with the funding of graduate assistants. Furthermore, it may provide faculty with potential practicum concepts for upcoming advanced studies graduate students.

To support this, Mr. Bobray Bordelon from Princeton offered the following recommendation during his qualitative interview:

Focus on your actual university not the trends out there. Don't jump on bandwagons without seeing what is really needed. Have subject experts that understand the actual fields they represent (economics, politics, sociology, etc.). Don't expect one person to know all data content and multiple statistical packages. Take advantage of graduate

students knowledge. Attend the biennial summer workshop at ICPSR on managing a social science data service. (personal communication, June 17, 2015)

### **Medium-Range Recommendations**

It is highly recommended that this program evaluation be reviewed and recompleted in three to five years in an effort to try and incorporate the initial baseline data that will be gathered in the coming years. By using this initial evaluation as a baseline, a subsequent “Beta Group”, could further refine this study to focus on specific topic areas that the CADRA team could improve upon once they are more established.

Additionally, it is recommended that in three to five years, as CADRA grows and its mission develops, so should the organizational chain of command. It is imperative that within any organization, a good leadership be established and clearly articulated to the communities for which it serves. In this case, CADRA’s service opportunities are considerable and vast, and therefore must ensure that they appropriately account for all of the stakeholders for which they assist.

### **Long-Range Recommendations**

First and foremost, a permanent funding source must be secured for the CADRA lab. This is an essential component to any long-term, successful organization and will ensure that CADRA is able to provide its marketed resources. It was consistently seen throughout the quantitative results by the various NPO’s and higher-education professionals that there was a disinterest in contributing self-funding to support or maintain a central data repository. Therefore, until CADRA can establish its legacy, a more stable funding source must be obtained. In addition, it was constantly noted in the qualitative findings that programs were on a strict full-cost recovery basis while receiving aid from their University, or the programs had an established



funding agreement with the federal government. This allowed these established national programs to support a minimum amount of staff annually to ensure continuity of operations, and established goals. Therefore, securing a guaranteed funding source will ultimately allow CADRA to ensure that the program staff is available to provide the promoted services and necessary training to the various students, faculty and outside organizations.

And finally to support this, Dr. Catherine Fitch of the Minnesota Population Center offered the following recommendation during her qualitative interview, “Pay attention to mission. Pay what is necessary for quality employees. Trickle-up good ideas. Take energy and successes and build off of them” (personal communication, June 30, 2015).

### Conclusion

Tim Berners-Lee, creator of the World Wide Consortium and Open Data Institute once said, “Data is a precious thing and will last longer than the systems themselves” (Tim Berners-Lee, n.d.)...... After a careful and systemic initial program evaluation by the Alpha Group, it was suggested that CADRA introduce several key recommendations in the coming years that will effectively ensure the programs long-term success and mission achievement. ....

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## Appendices