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Understanding the Factors Influencing the Perception of Organizational Sustainability Among Healthcare Professionals (HCPs) Post the Patient Protection and Affordable Care Act

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Sustainability Among Healthcare Professionals (HCPs) Post the Patient
Protection and Affordable Care Act**

By

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Genevieve Zipp, PT EdD

Submitted in partial fulfillment of the requirements for the degree of

Doctor of Philosophy in Health Sciences

Seton Hall University

2018

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To the giver of life and source of strength. This journey is the culmination of years both as a researcher and in isolation, synthesizing ideas of what has become my contribution to the dialog of healthcare systems and its challenges. Many people deserve to be acknowledged for the completion of this long doctoral journey.

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DEDICATION

I dedicate this dissertation research to the memory of my grandmother, Madam Alice Olufade, who took me in as a baby and raised the man I have become today. My journey from ILEWO continues...

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ABSTRACT

Understanding the Factors Influencing the Perception of Organizational Sustainability among Healthcare Professionals (HCPs) Post the Patient Protection and Affordable Care Act

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Seton Hall University, 2018

Dissertation Chair: Dr. Deborah DeLuca, M.S., JD

Background and Purpose of the Study: Healthcare costs in the United States has continued to increase annually, and new policy's attempt at protocol changes in healthcare practices does not ensure quality care delivery. An example of these policies include provisions and new guidelines under the 2010 healthcare legislation, - The Patient Protection and Affordable Care Act (ACA). The premise with the Affordable Care Act (ACA) is increased healthcare access for patients. However, not responsibly balancing the increased demand with the escalating cost of care creates an unsustainable system (Department of Health & Human Services, 2015). Healthcare organizations, including hospitals and medical practices, are challenged as they seek to balance between being a diagnostic, clinical entity, and one that can effectively and affordably resolve issues. The synopsis of care delivery in the US thus became one of high-cost pressure and high administrative burden, invariably leading to low-quality patient care. The purpose of this study is to understand the factors affecting healthcare organizational

sustainability. Secondly, to determine if the varying perception of healthcare organizations among healthcare professionals (HCPs) affect how they support the implementation of programs in building sustainable organizations. The perception levels were broken into four dependent groups: Unsustainable, Somewhat Sustainable, Moderately Sustainable and Very Sustainable.

Methods: This study utilized a quantitative methodology with a descriptive, exploratory, cross-sectional and correlational research design to measure the differences in perception levels of program implementation processes and determine the relationship between the factors of organizational sustainability. Eight (8) dependent variables were identified: Funding, Communication, Environmental, Partnerships, Evaluation, Adaptation, Strategic Planning, and Organization Capacity. A sample of 301 healthcare professionals participated in the study with a completion rate of 53%.

Results: All variables had a positive relationship to organizational sustainability in the small ($r=0.29$, $p<0.001$) to moderate rate ($r=0.42$, $p<0.001$) correlation. As scores for each of the sustainability variable increases, so does perception of the program within healthcare organizations. The results of the Multivariate Analysis of Variance (MANOVA) across the 4 perception groups (IV) and 8 dependent variables were statistically significant

at an alpha level of 0.01 but for the Environmental, Partnerships and Evaluation variables.

Conclusion: Healthcare policies might continue to change in an attempt to resolve issues around quality care delivery, but organizational cultures and design have a greater impact on healthcare organizational sustainability. The eight sustainability factors proved essential further highlighting their inter-relatedness and mutually reinforcing attributes. There were subtle inconsistencies in the perception of these variables and how they manifest across organizations among HCPs. The implementation of programs requires engagement from all employee levels and multi-disciplinary teams within a healthcare organization. If healthcare programs are deliberately structured with the eight sustainability factors in mind, organizations – including physician offices, and multi-system hospitals can be more successful. Further research is needed to determine categorical predictors for perception levels of organizational sustainability in light of healthcare policy changes. With a holistic framework for sustainability, healthcare managers can implement strategies to respond to policy changes, fine-tune operations and successfully manage the quality delivery of care.

Keywords: Leadership, Organizational Sustainability, Affordable Care Act, Perception, Funding, Communication, Environmental, Partnerships, Adaptation, Strategic Planning

Chapter I

INTRODUCTION

“The secret to getting ahead is getting started. The secret to getting started is breaking your complex overwhelming task into small manageable tasks and then starting on the first one”.

- Mark Twain

Background of the Problem

Healthcare institutions are at the core of many societies due to their impact on the physical and mental well-being of the communities they exist in. The organizational design and operational efficiency of these healthcare institutions determines how long they can continue to deliver quality care to the public. This dissertation explores the factors influencing organizational sustainability and the perception among healthcare professionals (HCPs). Sustainability as a concept is not an easily identifiable term within the US healthcare community. One of the reasons is that it has not reached a steady state or an acceptable standard by all metrics and for all stakeholders. The US system of care is one of the most advanced in the world, but the cost to maintain it is what every policymaker and care administrator has had to contend with over the years.

The US national healthcare expenditure including hospital visits, medications, and other services are approximately \$2.4 trillion, and inpatient hospital care makes up 30% of the cost structure (Martin, Lassman,

Washington, & Catlin, 2012). More importantly, healthcare makes up 17% of the US gross domestic product (GDP), and its growth rate has +25% over the last decade has exceeded annual inflation rate of 3% (OECD, Center for Medicare & Medicaid Services, 2014). This 17% is often compared to other developed nations such as the UK, Germany, Canada, Australia, and Japan who all range at approximately 10%. The US healthcare cost percent change in the last decade is also +25% growth compared to a single-digit growth of other nations. Not only are US citizens consumers of health care as patients, but it employs 11 million people - seven million as healthcare practitioners and technical occupations and four million in healthcare support occupations (Bureau of Labor Statistics, 2014). US Healthcare systems are challenged as they seek to balance between being a diagnostic and clinical entity and one that can effectively and affordably resolve issues (Huerta et al. 2008). With rising healthcare costs and high administrative burden for care providers, quality patient care is invariably affected, creating an unsustainable system.

The National Quality Forum (NQF) defines quality in healthcare as protocols, collectively designed, to systematically examine and improve processes of care and care support (NQF, 2013). The NQF through its accreditation is a standard by which optimal care delivery is perceived. The quality metrics and protocols are costly and sometimes perceived unrelated to the clinical outcomes. Assumedly, the cost associated with quality care such as preventive care (mammograms or immunization), reducing readmissions

and hospital-acquired infections and the ratio of providers to patients all have an impact on hospital financials. Therefore, healthcare institutions and practices that provide quality care do so incurring a high cost and at risk to their financial operations. Programs like quality metrics are implemented throughout organizations. The paucity is that there not enough evidence-based studies to support that a healthcare system that adopts quality care can sustain operations. More importantly, how do healthcare organizations implement programs effectively to contribute to organizational sustainability?

Another example of a program intended to foster quality care is reducing readmission rates in hospitals. Readmissions refer to unplanned patient admittance to a hospital within a certain time from the initial admission (Health Affairs, 2013). According to the American College of Emergency Physicians (ACEP), 20% of Medicare patients are readmitted to a hospital within 30 days of discharge, inflicting a strain on the healthcare systems, payers, and the most importantly vulnerable patients. Readmissions are therefore important to prevent given the hospital's capacity for patient care and the cost impact to our healthcare system. However, while research has focused on the relationship between readmission rates and clinical outcomes, the influence of organizational capacity on hospital financial performance and sustainability has not been addressed (Jynt & Jha, 2012). Organizational capacity in this study implies health care organizations that deliver high-quality clinical outcomes through various clinical and non-clinical means. The

fact that a hospital is deemed "capable" or certified by the National Quality Forum (NQF) or Joint Commission on Accreditation of Healthcare Organization (JHACO) does not guarantee it will remain sustainable over time.

For this study, organizational sustainability is defined as the ability to maintain a program and its benefits over time with the existence of structures and processes that allows an organization to leverage resources effectively (Schell et al., 2014). As more examples of the imbalance in healthcare delivery are highlighted, the strain on hospitals and physician practices is what makes the need for sustainable system organizations more pressing. As sustainability occurs within an organization, which are managed by leaders, it is imperative to outline the role of leadership in creating a sustainable organization. As top leaders develop the culture and overall strategy of organizations, managers diffuse and synthesize information and mediate with day-to-day activities (Birken et al., 2012). Employee perception of an organization is shaped both by leaders and the managers they interact with, so programs are adequately designed, delivered and sustained. (McAlearney, 2006).

The US healthcare system is considered one of the most advanced in the world. However, the perception remains that it is fragmented, complicated and expensive (Kurtzman, O'Leary, Sheingold, Devers, Dawson, & Johnson, 2011). The 2010 Patient Protection and Affordable Care Act (ACA) centers on

reducing overall cost in healthcare for the long term with new policies for improved access to healthcare. Literature supports that the implementation of ACA policies has been costly to healthcare institutions, inflicting more significant challenges in resource and financial management. Balancing the demand for healthcare with the escalating cost of care is a primary reason to evaluate an efficient delivery of care critically. This study provides a unique way of assessing if programs within health policy implementation have been beneficial to providers and the organization they belong to. More importantly, this study will enable the assessment of, if the benefit will be long lasting or a short-term fix that might require an overhaul in the near future.

Since programs can be generalized for healthcare providers, programs under the Affordable Care Act are used as a reference within this study. Another example of a program under the ACA that healthcare organizations might have adopted includes the Pay for Performance Model (PFP) by becoming an Accountable Organization (ACO). The Pay for Performance (PFP) model of care is where payment for services depends upon the medical quality and cost-effectiveness as espoused by the ACA (Damberg, Raube, Teleki and de la Cruz, 2009). Comprehensive care under the PFP model can reduce readmissions as it becomes evident that hospitals with sub-optimal processes of care will have high readmissions and invariably low operating/financial margins (Ly, Jha, Epstein, 2012). The ACO is one of the unique methods of achieving the PFP model and hospitals nationwide

have either registered as an ACO or are affiliated with one. However, what remains amiss is if hospitals are adopting the ACO mindset to comply with the ACA or they genuinely perceive it as a sustainable means of improving quality care. Other examples of provisions within the ACA to improve patient access to care include ending exclusions based on pre-existing conditions, ending lifetime limits on health insurance coverage, and extending insurance coverages of young adults under their parents' health plan (Department of Health & Human Services, 2015). The potential implication of these changes to hospitals and HCPs is that there might be an increase in their financial bottom line, due to a reduction in uncompensated care — as most of these "new access patients" were prior indigent care that misuses the emergency room. However, HCPs will also experience an increase in patients, procedures and other administrative work that will increase the workload of employees and potentially lead to sub-optimal care (Cheney, 2014).

Statement of the Problem

Similar to the ACA, ideas, and initiatives on how to curtail healthcare cost and optimize care delivery continually changes. Due to its effect on the economy, many stakeholders within healthcare including suppliers, and administrators have a different view on how to fix healthcare. The ability to deliver quality care requires a balance between clinical and non-clinical metrics. Rather than pass new laws or repeal existing ones, the

implementation process is what this study seeks to evaluate. The long-term success of any program requires a view on its sustainability.

The problem statement for this study is thus: there is a disconnect between the perception of healthcare providers on organizational sustainability and the factors that affect sustainability. All employee levels and multi-disciplinary teams within a healthcare organization help contribute to the implementation of programs and initiatives. Their perception of the program invariably impacts its probability of success and adds to the sustainability of the organization. With a holistic framework on sustainability, healthcare managers can implement strategies to respond to the constant policy changes, fine-tune operations and successfully manage the quality of care (Ramirez et al., 2013).

Purpose of the Study

The purpose of this study is two-fold. First, to understand the factors affecting healthcare organizational sustainability. As an important concept, the need to understand the variables beyond broad terms in the literature of financial, environmental and social. Secondly, to determine if the different perception of sustainability affects how HCPs support the implementation of programs in their organization. With frequent policy changes and a multitude of programs to implement, HCPs develop attitudes and beliefs that might impact implementation processes in their organizations. It is critical to

understand if their perception of the program sustainability aligns with its implementation process.

Variables

The eight dependent variables in this study are environmental, Funding, Communication, Evaluation, Adaptation, Strategic Planning, Organization Capacity, Partnerships. The independent variables are the four perception levels of organizational sustainability by HCPs - Unsustainable, Somewhat Sustainable, Moderately Sustainable and Very Sustainable.

Research Questions

The overarching research question framing the dissertation study is as follows:

What factors influence the perception of Organizational SUSTAINABILITY among Healthcare Professional (HCPs) under the 2010 Patient Protection Affordable Care Act (ACA)?

Broken out by the sustainability constructs, the corresponding research questions and hypothesis are as follows. These questions were to understand if all eight variables are indeed needed to build sustainable organizations or if one of the variables is more important than the other.

Research Questions 1 to 8 addressing Factors of Organizational Sustainability

RQ1: Is there a relationship between Environmental Support and Sustainability?

H1a: There is a relationship between Environmental Support and Sustainability

RQ2: Is there a relationship between Funding Stability and Sustainability?

H2a: There is a relationship between Funding Stability and Sustainability

RQ3: Is there a relationship between Organization Capacity and Sustainability?

H3a: There is a relationship between Organization Capacity and Sustainability

RQ4: Is there a relationship between Communication and Sustainability?

H4a: There is a relationship between Communication and Sustainability

RQ5: Is there a relationship between Program Evaluation and Sustainability?

H5a: Is there a relationship between Program Evaluation and Sustainability

RQ6: Is there a relationship between Program Adaptation and Sustainability?

H6a: There is a relationship between Program Adaptation and Sustainability

RQ7: Is there a relationship between Partnerships and Sustainability?

H7a: There is a relationship between Partnerships and Sustainability

RQ8: Is there a relationship between Strategic Planning and Sustainability?

H8a: There is a relationship between Strategic Planning and Sustainability

Research Questions 9 to 56 and its corresponding hypotheses address the differences between the four (4) perception levels and the eight (8) domains of sustainability. The 4 Perception Levels equals 6

Comparisons:

1. RQ9-RQ16 compares the Unsustainable vs. Somewhat sustainable groups
2. RQ17-RQ24 compares the Unsustainable vs. Moderately sustainable groups
3. RQ25-RQ32 compares the Unsustainable vs. Very sustainable groups
4. RQ33-RQ40 compares the Somewhat vs. Moderately sustainable groups
5. RQ41-RQ48 compares the Somewhat vs. Very sustainable groups
6. RQ49-RQ56 compares the Moderate vs. Very sustainable groups

The research questions are then constructed in the following format:

RQ: What is the difference between Group I and Group II's perception of a healthcare program as measured by a sustainability variable?

Ha: There is a difference between Group I and Group II perception of a healthcare program as measured by a sustainability variable.

Research Questions 9 to 56 addressing group differences:

RQ9: What is the difference between an unsustainable and a somewhat sustainable perception of a healthcare program among

HCPs as measured by the sustainability variable of environmental support?

H9a: There is a difference between an unsustainable and a somewhat sustainable perception of healthcare program implementation process as measured by environmental support

RQ10: What is the difference between an unsustainable and a somewhat sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of funding stability?

H10a: There is a difference between an unsustainable and a somewhat sustainable perception of healthcare program as measured by funding stability

RQ11: What is the difference between an unsustainable and a somewhat sustainable perception of a healthcare program among HCPs as measured by the sustainability construct of communication?

H11a: There is a difference between an unsustainable and a somewhat sustainable perception of a healthcare program as measured by communication

RQ12: What is the difference between an unsustainable and a somewhat sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of adaptation?

H12a: There is a difference between an unsustainable and a somewhat sustainable perception of a healthcare program as measured by adaptation

RQ13: What is the difference between an unsustainable and a somewhat sustainable perception of the healthcare program among HCPs as measured by the sustainability variable of evaluation?

H13a: There is a difference between an unsustainable and a somewhat sustainable perception of healthcare program as measured by evaluation

RQ14: What is the difference between an unsustainable and a somewhat sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of strategic planning?

H14a: There is a difference between an unsustainable and a somewhat sustainable perception of a healthcare program as measured by strategic planning

RQ15: What is the difference between an unsustainable perception and a somewhat sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of partnerships?

H15a: There is a difference between an unsustainable and a somewhat sustainable perception of a healthcare program as measured by partnerships

RQ16: What is the difference between an unsustainable perception and a somewhat sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of organizational capacity?

H16a: There is a difference between an unsustainable and a somewhat sustainable perception of a healthcare program as measured by organizational capacity

RQ17: What is the difference between an unsustainable perception and a moderately sustainable perception of healthcare program among HCPs as measured by the sustainability variable of environmental support?

H17a: There is a difference between an unsustainable and a moderately sustainable perception of a healthcare program as measured by environmental support

RQ18: What is the difference between an unsustainable perception and a moderately sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of funding stability?

H18a: There is a difference between an unsustainable and a moderately sustainable perception of a healthcare program as measured by funding stability

RQ19: What is the difference between an unsustainable perception and a moderately sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of communication?

H19a: There is a difference between an unsustainable and a moderately sustainable perception of a healthcare program as measured by communication

RQ20: What is the difference between an unsustainable perception and a moderately sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of adaptation?

H20a: There is a difference between an unsustainable and a moderately sustainable perception of healthcare program as measured by adaptation

RQ21: What is the difference between an unsustainable perception and a moderately sustainable perception of a healthcare program among HCPs as measured by the sustainability construct of evaluation?

H21a: There is a difference between an unsustainable and a moderately sustainable perception of healthcare program as measured by evaluation

RQ22: What is the difference between an unsustainable perception and a moderately sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of strategic planning?

H22a: There is a difference between an unsustainable and a moderately sustainable perception of a healthcare program as measured by strategic planning

RQ23: What is the difference between an unsustainable perception and a moderately sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of partnership?

H23a: There is a difference between an unsustainable and a moderately sustainable perception of a healthcare program as measured by partnerships

RQ24: What is the difference between an unsustainable perception and a moderately sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of organizational capacity?

H24a: There is a difference between an unsustainable and a moderately sustainable perception of a healthcare program as measured by organizational capacity

...

RQ25: What is the difference between an unsustainable perception and a very sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of environmental support?

H25a: There is a difference between an unsustainable and a very sustainable perception of a healthcare program as measured by environmental support

RQ26: What is the difference between an unsustainable perception and a very sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of funding stability?

H26a: There is a difference between an unsustainable and a very sustainable perception of a healthcare program as measured by funding stability

RQ27: What is the difference between an unsustainable perception and a very sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of communication?

H27a: There is a difference between an unsustainable and a very sustainable perception of a healthcare program as measured by communication

RQ28: What is the difference between an unsustainable perception and a very sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of adaptation?

H28a: There is a difference between an unsustainable and a very sustainable perception of a healthcare program as measured by adaptation

RQ29: What is the difference between an unsustainable perception and a very sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of evaluation?

H29a: There is a difference between an unsustainable and a very sustainable perception of a healthcare program as measured by evaluation

RQ30: What is the difference between an unsustainable perception and a very sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of strategic planning?

H30a: There is a difference between an unsustainable and a very sustainable perception of a healthcare program as measured by strategic planning

RQ31: What is the difference between an unsustainable perception and a very sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of partnership?

H31a: There is a difference between an unsustainable and a very sustainable perception of a healthcare program as measured by partnerships

RQ32: What is the difference between an unsustainable perception and a very sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of organizational capacity?

H32a: There is a difference between an unsustainable and a very sustainable perception of a healthcare program as measured by organizational capacity

...

RQ33: What is the difference between a moderate perception and a somewhat sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of environmental support?

H33a: There is a difference between a moderate and a somewhat sustainable perception of a healthcare program implementation as measured by environmental support

RQ34: What is the difference between a moderate perception and a somewhat sustainable perception of a healthcare program among HCPs as measured by the sustainability construct of funding stability?

H34a: There is a difference between a moderate and a somewhat sustainable perception of a healthcare program as measured by funding stability

RQ35: What is the difference between a moderate perception and a somewhat sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of communication?

H35a: There is a difference between a moderate and a somewhat sustainable perception of a healthcare program as measured by communication

RQ36: What is the difference between a moderate perception and a somewhat sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of adaptation?

H36a: There is a difference between a moderate and a somewhat sustainable perception of a healthcare program as measured by adaptation

RQ37: What is the difference between a moderate perception and a somewhat sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of evaluation?

H37a: There is a difference between a moderate and a somewhat sustainable perception of a healthcare program as measured by evaluation

RQ38: What is the difference between a moderate perception and a somewhat sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of strategic planning?

H38a: There is a difference between a moderate and a somewhat sustainable perception of a healthcare program as measured by strategic planning

RQ39: What is the difference between a moderate perception and a somewhat sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of partnerships?

H39a: There is a difference between a moderate and a somewhat sustainable perception of a healthcare program as measured by partnerships

RQ40: What is the difference between a moderate perception and a somewhat sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of organizational capacity?

H40a: There is a difference between a moderate and a somewhat sustainable perception of a healthcare program as measured by organizational capacity

...

RQ41: What is the difference between a very sustainable perception and a somewhat sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of environmental support?

H41a: There is a difference between a very sustainable and a somewhat sustainable perception of a healthcare program as measured by environmental support

RQ42: What is the difference between a very sustainable perception and a somewhat sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of funding stability?

H42a: There is a difference between a very sustainable and a somewhat sustainable perception of a healthcare program as measured by funding stability

RQ43: What is the difference between a very sustainable perception and a somewhat sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of communication?

H43a: There is a difference between a very sustainable and a somewhat sustainable perception of a healthcare program as measured by communication

RQ44: What is the difference between a very sustainable perception and a somewhat sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of adaptation?

H44a: There is a difference between a very sustainable and a somewhat sustainable perception of a healthcare program implementation as measured by adaptation

RQ45: What is the difference between a very sustainable perception and a somewhat sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of evaluation?

H45a: There is a difference between a very sustainable and a somewhat sustainable perception of a healthcare program as measured by evaluation

RQ46: What is the difference between a very sustainable perception and a somewhat sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of strategic planning?

H46a: There is a difference between a very sustainable and a somewhat sustainable perception of a healthcare program as measured by strategic planning

RQ47: What is the difference between a very sustainable perception and a somewhat sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of partnership?

H47a: There is a difference between a very sustainable and a somewhat sustainable perception of a healthcare program as measured by partnership

RQ48: What is the difference between a very sustainable perception and a somewhat sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of organizational capacity?

H48a: There is a difference between a very sustainable and a somewhat sustainable perception of a healthcare program as measured by organizational capacity

...

RQ49: What is the difference between a moderate perception and a very sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of environmental support?

H49a: There is a difference between a moderate and a very sustainable perception of a healthcare program as measured by environmental support

RQ50: What is the difference between a moderate perception and a very sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of Funding Stability?

H50a: There is a difference between a moderate and a very sustainable perception of a healthcare program as measured by funding stability

RQ51: What is the difference between a moderate perception and a very sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of Communication?

H51a: There is a difference between a moderate and a very sustainable perception of a healthcare program as measured by communication

RQ52: What is the difference between a moderate perception and a very sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of Adaptation?

H52a: There is a difference between a moderate and a very sustainable perception of a healthcare program as measured by Adaptation

RQ53: What is the difference between a moderate perception and a very sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of evaluation?

H53a: There is a difference between a moderate and a very sustainable perception of a healthcare program as measured by evaluation

RQ54: What is the difference between a moderate perception and a very sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of strategic planning?

H54a: There is a difference between a moderate and a very sustainable perception of a healthcare program as measured by strategic planning

RQ55: What is the difference between a moderate perception and a very sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of partnerships?

H55a: There is a difference between a moderate and a very sustainable perception of a healthcare program as measured by partnerships

RQ56: What is the difference between a moderate perception and a very sustainable perception of a healthcare program among HCPs as measured by the sustainability variable of organizational capacity?

H56a: There is a difference between a moderate and a very sustainable perception of a healthcare program as measured by organizational capacity

These research questions are arranged in the tables below for the last reporting of the analysis.

Table I
Tabular Representation of Research Questions and Hypotheses 9 to 16

	Group I	Group II	Construct
H9	Unsustainable	Somewhat Sustainable	Environmental Support
H10	Unsustainable	Somewhat Sustainable	Funding Stability
H11	Unsustainable	Somewhat Sustainable	Communication
H12	Unsustainable	Somewhat Sustainable	Adaptation
H13	Unsustainable	Somewhat Sustainable	Evaluation
H14	Unsustainable	Somewhat Sustainable	Strategic Planning
H15	Unsustainable	Somewhat Sustainable	Partnerships
H16	Unsustainable	Somewhat Sustainable	Organizational Capacity

Table II
Tabular Representation of Research Questions and Hypotheses 17 to 24

	Group I	Group II	Construct
H17	Unsustainable	Moderately Sustainable	Environmental Support
H18	Unsustainable	Moderately Sustainable	Funding Stability
H19	Unsustainable	Moderately Sustainable	Communication
H20	Unsustainable	Moderately Sustainable	Adaptation
H21	Unsustainable	Moderately Sustainable	Evaluation
H22	Unsustainable	Moderately Sustainable	Strategic Planning
H23	Unsustainable	Moderately Sustainable	Partnerships
H24	Unsustainable	Moderately Sustainable	Organizational Capacity

Table III
Tabular Representation of Research Questions and Hypotheses 25 to 32

	Group I	Group II	Construct
H25	Unsustainable	Very Sustainable	Environmental Support
H26	Unsustainable	Very Sustainable	Funding Stability
H27	Unsustainable	Very Sustainable	Communication
H28	Unsustainable	Very Sustainable	Adaptation
H29	Unsustainable	Very Sustainable	Evaluation
H30	Unsustainable	Very Sustainable	Strategic Planning
H31	Unsustainable	Very Sustainable	Partnerships
H32	Unsustainable	Very Sustainable	Organizational Capacity

Table IV
Tabular Representation of Research Questions and Hypotheses 33 to 40

	Group I	Group II	Construct
H33	Somewhat Sustainable	Moderately Sustainable	Environmental Support
H34	Somewhat Sustainable	Moderately Sustainable	Funding Stability
H35	Somewhat Sustainable	Moderately Sustainable	Communication
H36	Somewhat Sustainable	Moderately Sustainable	Adaptation
H37	Somewhat Sustainable	Moderately Sustainable	Evaluation
H38	Somewhat Sustainable	Moderately Sustainable	Strategic Planning
H39	Somewhat Sustainable	Moderately Sustainable	Partnerships
H40	Somewhat Sustainable	Moderately Sustainable	Organizational Capacity

Table V
Tabular Representation of Research Questions and Hypotheses 41 to 48

	Group I	Group II	Construct
H41	<i>Somewhat Sustainable</i>	<i>Very Sustainable</i>	<i>Environmental Support</i>
H42	<i>Somewhat Sustainable</i>	<i>Very Sustainable</i>	<i>Funding Stability</i>
H43	<i>Somewhat Sustainable</i>	<i>Very Sustainable</i>	<i>Communication</i>
H44	<i>Somewhat Sustainable</i>	<i>Very Sustainable</i>	<i>Adaptation</i>
H45	<i>Somewhat Sustainable</i>	<i>Very Sustainable</i>	<i>Evaluation</i>
H46	<i>Somewhat Sustainable</i>	<i>Very Sustainable</i>	<i>Strategic Planning</i>
H47	<i>Somewhat Sustainable</i>	<i>Very Sustainable</i>	<i>Partnerships</i>
H48	<i>Somewhat Sustainable</i>	<i>Very Sustainable</i>	<i>Organizational Capacity</i>

Table VI
Tabular Representation of Research Questions and Hypotheses 49 to 56

	Group I	Group II	Construct
H49	Very Sustainable	Moderately Sustainable	Environmental Support
H50	Very Sustainable	Moderately Sustainable	Funding Stability
H51	Very Sustainable	Moderately Sustainable	Communication
H52	Very Sustainable	Moderately Sustainable	Adaptation
H53	Very Sustainable	Moderately Sustainable	Evaluation
H54	Very Sustainable	Moderately Sustainable	Strategic Planning
H55	Very Sustainable	Moderately Sustainable	Partnerships
H56	Very Sustainable	Moderately Sustainable	Organizational Capacity

Significance of the Study

Sustainability is a broad and debated subject, often difficult to define and inaccurately applied into real projects, especially when dealing with an intricate system as healthcare (Buffoli, Capologna, Botterro, Cavagliato, Speranza, Volpatti, 2005). It is therefore essential to characterize organizational sustainability not just as a financial or economic measure, but one that includes social and environmental variables. Buffoli et al.'s (2005) research on health care sustainability highlights that a hospital, sustainable in both its structure and management has the only possibility to promote wellbeing and healthiness for people attending it. Therefore, it is important to understand the relevance and practicality of sustainability variables for healthcare professionals. Another point of significance is the HCPs' perception of the healthcare programs in their organizations. Understanding the relevant sustainability variables to HCPs can further be aligned to their overall perception of programs to understand healthcare organization's implementation process better. The overall perception of the program in the context of organizational sustainability will help assert if HCPs experience in the implementation process is relative to relevant variables as suggested by research.

Operational Definitions

For this study, sustainability is assessed using the primary constructs of research conducted by Luke, Calhoun, Robichaux, Elliott, Moreland-

Russell (2014). These constructs outlined eight factors that public health programs used to deliver benefits by sustaining funding, policies, and activities over time. As the terminology and definitions of the sustainability factors vary by industry, it is important to understand them for the purpose of this study, relative to the hospital industry. The operational definitions for the eight (8) primary factors of sustainability per literature are listed below:

- o **Environmental Support:** Having a supportive internal and external climate for the program
- o **Funding Stability:** Establishing a consistent financial base program
- o **Partnerships:** Cultivating connections between the program and its stakeholders
- o **Organizational Capacity:** Having the internal support and resources needed to manage the program and its activities effectively
- o **Program Evaluation:** Assessing program to inform planning and document results
- o **Program Adaptation:** Taking actions that adapt the program to ensure its ongoing effectiveness
- o **Communications:** Strategic communication with stakeholders and the public

- o **Strategic Planning:** Using processes that guide program's direction, goals, and strategies

(Luke, et al. 2014)

Moreover, for this study, **healthcare organizations** include physician offices, nursing homes, long-term care facilities, clinics, and hospitals.

Programs are defined as the adoption or implementation of a set of activities in compliance with the Patient Protection and Affordable Care Act (2010) Public Law 111–148. Examples of programs include but not limited to quality initiatives, increasing patient satisfaction (HCAHPS), reducing 30-day readmission rates, Prevention of hospital-acquired conditions (HAC), etc. Additionally, **perception** is defined as the attitude or belief of healthcare professionals about their organization regarding Sustainability. Perception of organizational sustainability was categorized into four groups: Unsustainable, Somewhat Sustainable, Moderately Sustainable and Very Sustainable.

Conceptual Framework

The conceptual framework binding this study was developed through the literature review on healthcare organizational sustainability, and anchored on the theory of perception. With regards to perception, early empiricists suggest that the nature of perceptual experience is given by citing the object presented to the mind in that experience (Grice, 1961). This implies that for anyone to have a perception on something - for P (*person*) to perceive O (*object*), O must have a relationship with P, such that O causes P to have a

perceptual experience or *sensum* - S. That is, for perception to exist, there has to be a connection between O and S (Arstilla et al. 2009). Current literature on perception has replaced the appeal to direct objects with the claim that perceptual experience can also be characterized by representational content (Brewer, 2006). As it applies to this study, healthcare programs in organizations are more of representational content rather than objects to the HCPs experience.

As stated earlier, sustainability is a broad subject with several evaluation methods regarding healthcare organizations. However, each has its own specific approach with variables perhaps not comprehensive enough in light of the programs under the ACA. To establish a baseline for what constitutes sustainability in healthcare, major themes such as **Environmental, Social and Economics** emerge from literature. These themes all address aspects of sustainability but none comprehensive enough to be experienced by HCPs. Topics such as staffing ratios, labor, business acumen and mergers all exist within the Economic construct in literature while building efficiency, water usage, window and daylight management exist under the environmental construct. Research under the social construct highlight themes such as communication, health promotion, employee burnout and community engagement.

This research topic, understanding factors influencing the perception of organizational sustainability among HCPs bears a resemblance to the shape

of an inverted pyramid or funnel as depicted in figure 1 below. The primary variables are organizational sustainability and perception. The reference to the ACA is used as an anchor for time reference to HCPs in the study. As a landmark legislation, the ACA influences care delivery significantly. The objective of the study is to drill into what makes up sustainability (factors) and how relevant it is in healthcare organizations.

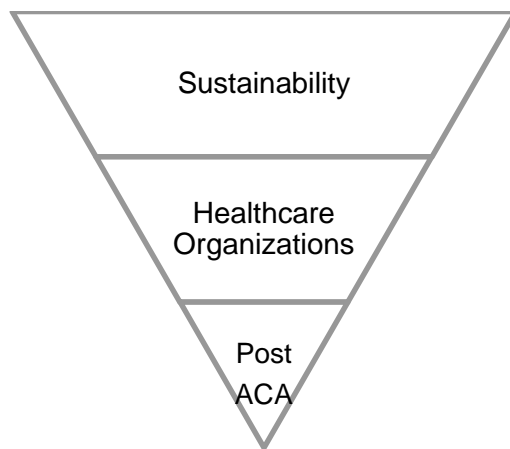


Figure 1. Principal Investigator (PI) Developed Framework on Research Topic

The major themes within sustainability are summarized into three - Economic, Environmental and Social. Existing literature shows these constructs have been covered relatively the same but in isolation. The figure below depicts this with an inquiry to see if economic, environmental and social factors do genuinely equate to sustainable organizations.

Moreover, these main constructs grouped into three broad (macro) systems can be postulated to support the bedrock of sustainability. Recall, sustainability considers the balance between social, economic, and

environmental factors. Each of these evaluating system (macro areas) have been used independently to assess sustainability in healthcare (Buffolli, 2005). However, each system has with its own specific approach to a unique set of variables and perhaps not comprehensive enough in light of the new policy changes. Criteria and indicators are tools used to define, guide, monitor and assess progress towards sustainable in a given context.

The advancement with this school of thought gave reason to Schell et al.'s 2014 research. According to Schell, sustainability is the existence of structures and processes that allow a program or organization to leverage resources in effectively implementing and maintaining evidence-based policies and activities. Schell considered terms like Environmental Support, Funding Stability, Partnerships, Organizational Capacity, Program Evaluation, Program Adaptation, Communication, and Strategic Planning as practical terms that can be used to assess and fine-tune the sustainability of programs in an organization.

Finally, these sustainability variables are anchored with Grice's perception theory as HCP's experience in their organization and the long-term success of the programs. According to Pickens (2005), to entirely have the sense of an experience, the tri-component model of attitudes becomes relevant: feelings, beliefs, and actions. The HCP's perception of these variables determines if the variables are indeed relevant to sustainability, their interdependencies, and mutual reinforcement and if they perceive the

variables are really manifesting in their organizations. The illustration below summarizes the PI generated illustration depicting HCPs perception of sustainability variables affecting healthcare programs in their organization.

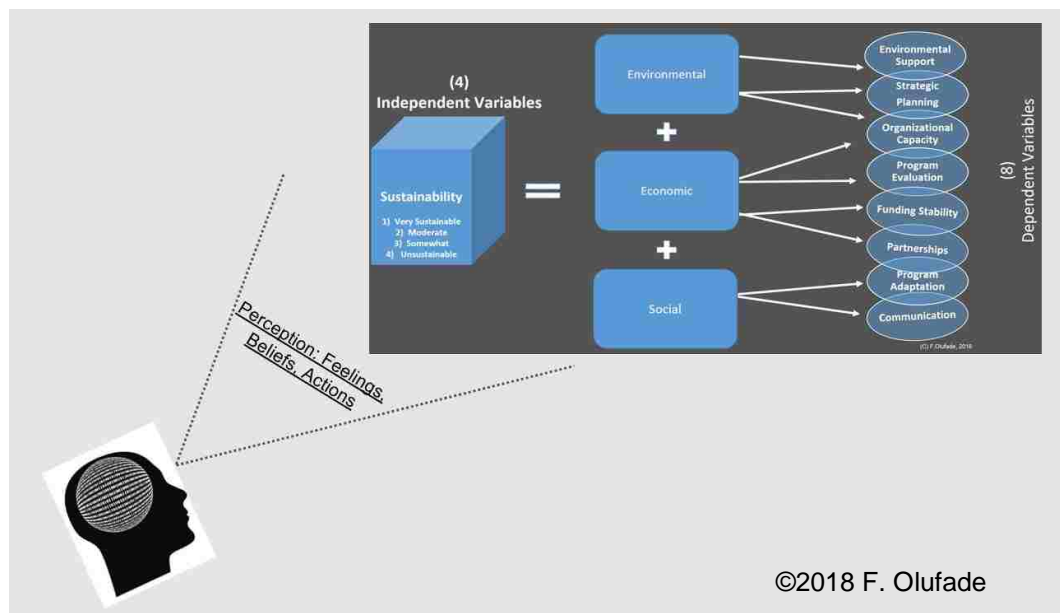


Figure 2. Principal Investigator (PI) developed conceptual framework on the variables of healthcare organizational sustainability as perceived by a healthcare professional with the tri-component model of attitudes: feelings, beliefs, and actions.

Chapter II

REVIEW OF RELEVANT LITERATURE

What is Organizational Sustainability?

Healthcare organizations by definition have clinical services as their primary value proposition. People go to hospitals because they perceive it as a place they can secure clinical guidance on any of the many types of ailments. However, as much as hospitals are associated with medicine, it is also a business. A business with employees, customers, and processes to achieve its goals and objectives. Huerta, Peterson, Ford, and Brigham (2008), summarized that the business model at hospitals can be outlined in two ways: (1) Being a diagnostic entity that seeks to understand the cause and the treatment options of diseases, (2) Being the able to effectively and affordably resolve the issue (Huerta et. al, 2008). By focusing on the second of the two-value propositions, high-quality care delivery can be achieved with improved financial and operational performance. Thus, sustainability in healthcare organizations is defined as the ability to maintain a program and its benefits over time with the existence of structures and processes that allows an organization to leverage resources effectively (Schell et al., 2014). In this chapter, the significance of programs under the Affordable Care Act is discussed, highlighting examples of the programs and impact to healthcare organizations. The healthcare business model is also highlighted with examples on the state of care delivery is offered with data on the New Jersey

hospitals systems. Finally, the three main constructs of organizational sustainability – Economic, Social and Environmental - is reviewed with the prevalent themes within each.

The Patient Protection and Affordable Care Act was passed in 2010 as a landmark legislation to reform healthcare in the United States. Also known as Obamacare, the Affordable Care Act set out to cover the millions of Americans that were without or those that cannot afford healthcare insurance. The tenet of the Affordable Care Act was to provide healthcare coverage for more Americans by reforming the private insurance market, expansion of Medicaid to people with income up to 133% of the federal poverty level, transform the way medical decisions are made. The effect, however, has not yet been fully realized and it is too early to know how it will affect hospitals financially. Patients, on the other hand, have realized that despite health insurance, medical bills might continue to increase for various reasons. Eventually, when hospitals find patients in situations where they cannot pay for services rendered, it will lead to hospitals inability to sustain operations. Healthcare is the provision and delivery of consultative services, medicines, and devices for the treatment and prevention of physical and mental illness (Boscheck, 2006). The integration of the delivery of services, the demand and supply of medicines, and medical devices creates the dynamic called the healthcare system. This supply and demand for healthcare occur with many other stakeholders including pharmacy retailers, drug manufacturers, health

insurance companies also known as intermediaries. As many intermediaries occupy the healthcare system, fragmentation of care occurs. This fragmentation can be in the form of a patient not knowing the true cost of the care and payers using administrative protocols as a deterrence to clinical practice. These examples dissuade healthcare providers in how they engage with their organizations. The notion of sustainability supports the predictive purpose of this study as literature posit the need to assess the relationship between internal and external variables that impact organizational performance over time in the view of policy changes and intermediaries.

Further, literature has shown that the US hospital industry's formula to success includes the ability to control cost under a fixed reimbursement system. Gross underpayment by payers and misaligned incentives between hospitals and physicians are identified as causes. However, controllable variables exist in the delivery of quality care (Reinhardt, 2008). Buffoli et al.'s (2005) research on hospital sustainability highlights that to be sustainable, both structure and management have to promote wellbeing and healthiness for people attending it. With programs under the Affordable Care Act, quality initiatives are metrics established to enhance care delivery. Quality initiatives are standards established to track the underuse, overuse or misuse of resources in healthcare delivery systems. Examples of quality initiatives include increased patient satisfaction (HCAPS), reducing 30-day readmission rates and prevention of hospital-acquired conditions (HAC). The US

healthcare industry is challenged in establishing a relationship between the implementation of quality initiatives and hospital finances (DesHarnais, McMahon, and Wroblewski, 1991; Coleman, Parry, Chalmers and Min, 2006). To make the quality and finance connection successfully, hospitals and healthcare providers require a firm grasp on the causes, complication, and costliness of the environment in which they operate (Narasimhan, 2005). The establishment of this relationship further makes for the creation of sustainable healthcare organization.

To illustrate the status of care delivery in the US, data on New Jersey (NJ) hospitals finances and operations offers insights into the severity of the imbalance between clinical and non-clinical metrics among healthcare organizations. On average, NJ hospitals have excess hospital bed capacity and high utilization of services, both of which have contributed to healthcare cost which is higher than average. The inpatient capacity is 36% higher than that of the average US state, and its Medicare patients' hospital length of stay exceeds the national average by 50% (Reinhardt, 2008). In the 1990s, NJ hospital industry was deregulated, creating a competitive service model to drive down cost. NJ hospitals have continued to struggle financially, and significant efficiencies have not materialized. In the past years, financial pressures that stem from continued low payment rates and rising operating costs have plagued NJ hospitals. Additionally, hospitals have seen revenues diminish because health plans have become more aggressive in their

inpatient utilization management process (NJHA, 2009). The challenges NJ hospitals face in the delivery of quality care are not unique and are multi-faceted. Literature highlights that of the many variables contributing to the lack of quality care – healthcare systems, physicians, and patient-related factors, system related factors can be highlighted and enhanced to improve a hospitals environmental, economic and social position (Weinberg, Oddone, and Henderson, 1996). Beyond, the broad macro segments of economic, social and environmental variables, micro variables that are actionable become of interest to change the current trend for healthcare organizations and how they can remain sustainable.

Literature supports the importance of using more reliable, non-financial metrics in measuring the performance of healthcare organizations. Hospital performance, under CMS guidelines, focuses on how well hospitals' overall quality of care is delivered to patients (CMS, 2005). However, it remains crucial that high-performing hospitals based on clinical quality standards do not imply that these hospitals will survive financially. Therefore, funding stability became a variable with any program as a way to remain sustainable. As stated earlier, the healthcare industry has a considerable impact on national economies; therefore, it is important to understand if these organizations have resources (human and capital) and processes to support themselves in the long run. What remains amiss from literature is if high performing healthcare organization have the bandwidth to invest in processes

to assure quality care is delivered thoroughly and consistently over time. Hence, the notion of healthcare sustainably, (under the new health care reform and with regard to the variables: economic, social and environmental, across any defined time) becomes questionable.

Healthcare as a Business

Healthcare organizations have many commonalities with corporations and business entities in the US. Among the commonalities are organizational goals, employees (staff and management), and resources that need to be managed effectively. However, care delivery is unique in that it is the only service industry where the customer often does not pay the cost of the services or goods they receive. The reason was highlighted earlier with the pervasiveness of intermediaries including product suppliers, drug and device manufacturers, health insurance companies and retail pharmacies. Unlike other business models, market forces have not been able to keep the cost of healthcare down due to the pervasiveness of private and public insurance (Vitiello and Toren, 1996). Payment methods in healthcare organizations have forced care delivery to be volume driven rather than value-based. Examples of hospital sources of revenues models include the Pay-for-Performance and Fee-for-Service models. The Fee for Service (FFS) payment model is where health services are paid for based on the number of activities rendered by providers (Access Project, 2000). Pay for Performance

(PFP) model is where payment for services depends upon the medical quality and cost-effectiveness (Damberg, Raube, Teleki and de la Cruz, 2009). The implementation of any new program in a healthcare organization comes at a significant cost. However theoretically sound, the successful implementation and monitoring of these programs are what ensure the organization's sustainability.

As sustainability occurs within an organization which is managed by leaders, it is imperative to outline leadership's role in creating a sustainable organization. The role of managers and leaders is essential in any healthcare program implementation. As top leaders develop the culture and overall strategy of organizations, managers diffuse and synthesize information and mediate with day-to-day activities (Birken et al., 2012). Employee perception of an organization is shaped both by leaders and the managers they interact with, so programs should be adequately designed, delivered and sustained. (McAlearney, 2006). Literature supports the importance of using more reliable, non-financial metrics in measuring organizational performance. Several evaluation systems regarding healthcare organizational sustainability are purported to exist. Each, however, has its own specific approach to a unique set of variables and perhaps not comprehensive enough in light of the new health care law. Two popular theories and tools: The Leadership in Energy and Environmental Design program (LEED) and Building Research Establishment Environmental Assessment Methodology (BREEAM) are

centered on the environmental evaluation of sustainable buildings (Buffoli, 2005). Other tools focused on the social sphere of healthcare including the patient-physician relationship, out-patient customer service, outreach and improved patient access. The Joint Commission International Standard comes closest to balancing the triple objective of sustainability with its focus on economic and medical variables of a healthcare system (Buffoli, 2005). However, these tools might appear complex, requiring consultancy from a pool of experts, causing long time and high costs for their application (Buffoli, 2005). As stated earlier, tools and metrics, which support the social, environmental and economic development of a healthcare organization are imperative for the system's sustainability.

How HCPs view Organizational Sustainability

First, an overview of studies recently conducted of importance to the research topic. These are positioned as seminal articles on the perception of healthcare professionals on organizational sustainability as they are pivotal and most thorough on the topic. McAlearney's 2006 study with health system CEOs discussed a model necessary to influence program design decisions and impact organizational effectiveness. For this, commitment to leadership development in healthcare is prioritized to be influenced by strategy, culture, and processes for sustainability according to the leaders in the McAlearney study. In the context of inherently complex healthcare organizations,

strategy, culture, and processes are required to build engagement across all multi-disciplinary teams and employee levels. Martinez et al. (2017) conducted a mixed-methods study of Veterans Affairs health care providers' experiences communicating with patients about new policy changes that might affect their care. The results show a greater percentage of HCPs (75%) are only "somewhat" (below mid-level understanding) knowledgeable about the programs and close to 50% are having conversations with veterans. This study highlights a breakdown in communication in the healthcare organization, but more importantly, most HCPs do not feel compelled to share non-medical information with patients. The question then remains why some HCPs are more comfortable having a non-medical dialog about care related issues with patients. Ostermeier and Camp's 2016 exploratory study investigated the perceptions of programs under the Affordable Care Act among patient-facing healthcare professionals. This study revealed confounding variables such as political affiliation and ethnicity were the two most significant predictors of negative perception. Jette & Jewell (2012) observational study on the use of quality indicators in physical therapist practice reported PTs reported a low frequency of performing examinations supporting primary and secondary prevention (3%-50%) and use of standardized measures (4%-36%) — quality measures as recommended by the healthcare organizations. These results show staggering ideas into what healthcare practitioners are told to do and what they perform. A rationale

behind this is perhaps the lack of a shared value behind the practices and recommendation. Most importantly what this study revealed is that an organization with less than 50% compliance rate among its employees towards achieving a goal compromises the organization's success.

Reed et al.'s (2012) qualitative study on 20 healthcare executives revealed support for any program is based on perception. This qualitative study had multi-disciplinary executives from health insurance companies, administrators from hospital systems, and primary care physicians. According to the study, healthcare innovation reflected more of an organizational perspective: Insurance executives emphasized cost-effectiveness vs. HCPs emphasize care delivery processes as routes to delivering patient-centered care. The importance of this study is that both groups found a reason, although different to support innovation in healthcare. Similarly, Tietze & Sinha's (2003) study examined the perceptions of HCPs - administrators vs. practitioners on the impact of managed care (insurance plans) on quality care delivery. Administrators had a more positive perception of the impact of health insurance. However, in a typical hospital setting, there are more staff nurses and doctors than administrators. Only a few (administrators) having a favorable opinion on how healthcare is financed, which highlights a disconnect and a growing opportunity area for information sharing. In healthcare organizations, aligning the values and sharing information behind new programs builds more support in its execution and

increases the chance of its long-term success. Harmon et al.'s (2003) describe the process of information sharing across all employee creates the effect of a high-involvement work system (HIWS) on employee satisfaction. HIWS was associated with both greater employee satisfaction and lower patient costs indicating these practices pay off in both humanistic and financial terms for healthcare organizations.

Authors	Results
McAlearney, A. (2006)	35 health system CEOs described the commitment to leadership development in healthcare sustainability is influenced by strategy, culture, and processes
Martinez, R. K., et al. (2017)	75% of 251 HCPs survey reported being "somewhat" knowledgeable, and 49% reported having had conversations with veterans about how the ACA affects their care
Ostermeier, K., & Camp, K. M. (2016)	169 full-time HCPs reported two significant predictors of negative perceptions of ACA were political affiliation and ethnicity
Jette, D. U., & Jewell, D. V. (2012)	Participants reported a relatively low frequency of performing examinations and interventions supporting primary and secondary prevention and use of standardized measures
Reed, P., Conrad, D. A., et. al (2012)	Healthcare innovations reflected organizational perspectives: Health Plans emphasized cost-effectiveness vs. HCPs emphasize delivery processes
Harmon, J. et al. (2003)	Effects of high-involvement work systems (HIWS) were associated with both greater employee satisfaction and lower patient costs indicating these practices pay off in both humanistic and financial terms
Tietze, M. F., & Sinha, S. K. (2003)	Administrators had a more positive perception of managed care impact on care delivery than practitioners

Figure 3: Key studies in the literature on healthcare organizational sustainability

Economic Sustainability. Another area in literature where sustainability has been described is in the economics and finances of organizations. On the general concept of sustainability, Anderson's' (2016) study highlighted factors as such as adaptability, business acumen, technology and stability as ways to maintain healthcare's viability. This study highlights practical measures — (increasing business acumen) but also non-practical ones — (stability, growth). Other prevailing dialogs on the economics of healthcare sustainability focuses on connecting healthcare financial concepts to increasing value of the organization. For example, Langabeer & Champagne (2016) explored the business strategy in Health Information Exchange (HIE) organizations (an ACA concept) through nursing homes seeking adoptions. 60% of the HIE CEOs considered their organizations as sustainable, although 5% admitted not financially viable and 9% was in a phase of divestiture (exit). Suggestion for remedies included improving technological processes and incorporating HIEs into the existing workflows of nursing homes. The incorporation into current workflows is a form of adaptation that aids employees to transition and support a new program seamlessly. Chen, Bazzoli, et al.'s (2009), analysis on hospital financial conditions and discovered not-for-profit (NFP) hospitals with strong financial performance provide more unprofitable services for the insured and uninsured than for-profit (FP) hospitals. This implies ineffective resources management even if the organization is classified not-for-profit. Cho & Pucik (2005) used structural

equations to test the relationship between innovativeness, quality, growth, profitability, and market value. Among the results, their model concluded that innovation mediates the relationship between quality and growth. Healthcare organizations need to be creative even in the implementation process of innovative programs to remain viable for growth, especially in a competitive market.

On the contrary, Mutter et al. (2008) sought to determine the effects of hospital competition on inpatient care using regression models. Results from this study showed inconsistencies with some indicators showing improvements in hospital quality with higher levels of competition, some showed decreases in hospital quality, and others were unaffected. Therefore, external market forces are less important in sustaining healthcare organizations, but the capacity and structure of individual organizations. Kurtzman et al.'s 2011 study introduced the idea that performance-based incentive policies increase the burden on employees and do not positively affect quality care delivery. Concerns about implementing an incentive-based program did not positively affect the entire workforce especially staff nurses in building a sustainable organization. The belief that performance-based incentives would improve quality and safety should simultaneously address staffing levels, work environment, salaries, and turnover. It is crucial that policymakers and administrators in any organization invest in implementation support and redesign incentives to reward teamwork, and involve nursing

leaders. Based on this study, an inclusive process of program implementation is required to foster a sustainable organization.

Authors	Results
Anderson, G. L. (2016)	4 major themes on the viability of solo medical practice - Adaptability/Flexibility, Business Acumen, embrace technology and stability/growth
Langabeer, J. R., & Champagne, T. (2016)	60% of hospitals considered themselves sustainable, 5% admitted not financially viable, 9% was in a phase of divestiture (exit)
Chen, H.-F., Bazzoli, G. J., & Hsieh, H.-M. (2009).	Non-profit hospitals with strong financial performance provide more unprofitable services for the insured and uninsured than for-profit (FP) hospitals
Cho, H., & Pucik, V. (2005).	Innovation mediates the relationship between quality of care and growth of healthcare institutions
Mutter, Wong, and Goldfarb (2008)	Effect of competition has both positive and negative impact on quality measures
Kurtzman et al. (2011)	HCPs had favorable impressions on performance-based policies effect on quality and safety. Concerns about increasing the burden for nurses without improvements in staffing levels, work environment, salaries, or turnover

Figure 4: Summary of key studies describing the economic sustainability of healthcare organizations.

Environmental Sustainability. On the environmental factors for organizational sustainability, various studies support how environmental friendly conditions lead to cost savings. However, the environmental support within this study discusses the nature-friendly element of a healthcare organization but also evaluates the nurturing conditions – less nature but more of advocacy and champions - to plan, develop and implement programs. The American Hospital Association (AHA, 2014) considers it “good business” — as it helps lower operational costs and allows hospitals to direct

more resources to patient care. Among examples cited in the AHA report is Memorial Hermann Health System saving \$47 million through energy improvements over five years; Kaiser Permanente saving \$4 million annually by buying energy-efficient computers. Faezipour (2014) found that a systems-thinking approach to water usage in hospitals — devised factors and favor inter-relatedness regarding decisions and behaviors on water usage. This dynamic approach highlighted an interesting approach to factors affecting a complex system such as healthcare as mutually reinforcing variables. Similarly, the impact of external factors cannot be understated as some have a more significant stake than healthcare organizations. Alshehri (2016) study on advancing sustainability showed limited financial resources and lack of regulation are top challenges for driving sustainability initiatives. The role of external stakeholders such as non-governmental agencies (NGOs) in the interconnected process of care delivery was uncovered. In the example of mercury disposal, partnerships with other agencies who can help drive and influence change (catalytic role). The impact of healthcare reform on the sustainability of hospitals continue to reveal the interrelatedness of the variables of sustainability. Although discussed in isolation, the emergent themes from Lynch's (2006) study: investment in information technology (IT) resources to support an EMR system, strategies to address healthcare workforce challenges in out-patient clinics with an effect on patient safety and quality of care.

Authors	Results
Richardson, J., et. al (2015).	Nursing students were positive about sustainability and climate change and its inclusion in the curriculum, irrespective of their participation in the sustainability
Sagha Zadeh, R., Xuan, X., & Shepley, M. M. (2016).	Healthcare facilities rank 2nd among building types in energy use per square foot and rank 4th in total energy use
Faezipour, M. (2014).	A “systems-thinking” approach to water usage in hospitals — devised factors and favor inter-relatedness regarding decisions and behaviors on water usage.
Lynch, C. J. (2016)	Emergent themes: Investment in IT resources to support EMR system, strategies for healthcare workforce challenges, and strategies for sustainability of managed care outpatient services and patient safety and quality of care
Alshehri, A. (2016)	Limited financial resources and lack of environmental regulation are top challenges for sustainability initiatives. Increase role of external stakeholders (NGOs) in the interconnected process of healthcare

Figure 5: Summary of key studies describing the environmental sustainability of healthcare organizations.

Social Sustainability. On the social front, literature tends to focus on partnership, talent management, leadership and ways to manage teams beyond program implementation to long-term success. This is particularly important especially with leadership as employees develop their perception of an organization based on their interactions with leaders and managers. A study by Strong (2015) highlighted healthcare organizations have been slow to adopt the model of the tri-factor objective of environmental social and economic goals like other industries. For longevity and organizational success, critical factors such as organizational identity, financial administration, effective leadership and efficiency of operations, products

services and programs were identified (Strong, 2015). To achieve this level of success, the engagement of leaders and multi-disciplinary teams is required. Healthcare leaders' perceived consciousness did not influence their execution of sustainability initiatives (Riviera, 2016). This study implies leaders can separate their perception from the execution of initiatives. However, all employees are required for the actual success or failures of new initiatives. Leadership is usually a small percent of most healthcare organizations, so getting the many hierarchical layers involved increases the chances of programs success.

Similarly, Coleman et al. (2006), highlighted involving caregivers for care transitions intervention as a way of achieving better outcomes with discharged patients. The results of a randomized controlled trial encouraged patients and their caregivers to assert a more active role during care transitions to reduce rehospitalizations rates. Results of this study showed intervention patients had lower re-hospitalization rates at 30 days (8.3 vs 11.9, $P = .048$) and at 90 days (16.7 vs 22.5, $P = .04$) than control subjects. Healthcare organizations that accentuate these values among its employees and partners will the community creates the foundation for long-term success. This model of care allows for achieving better clinical outcomes by engaging outside the healthcare organization. Ramirez et al. (2013) focused on what it takes to develop a culture of sustainability in healthcare organizations. This study concluded that healthcare managers could implement strategies for

multidisciplinary teams to respond to the change, fine-tune operations and successfully manage the quality of care with a holistic framework for care delivery. As highlighted with other 2 main constructs (environmental and economic), themes overlap showing the interrelatedness and mutual reinforcements of each other. Leadership support is necessary to develop any new initiative in an organization but communicating through a feedback loop can allow for adaptation and engage more employee for the success of the program. In Australia, despite multiple barriers, including funding and lack of policy direction, health promotion principles and practices were adopted for community engagement in enabling the development of sustainable healthcare organizations.

Authors	Results
Coleman et al. (2006)	Intervention patients had lower rehospitalization rates than other subjects without active caregiver involvement
Ramirez, et al. (2013)	A holistic framework for sustainability supported healthcare managers to implement strategies for multidisciplinary teams to respond to change, fine-tune operations and successfully manage the quality of care
Fleischer, et al. (2015)	3 essential characteristics of sustainability: benefits, institutionalization, and development. 11 other factors that most influenced long-term sustainability were grouped into innovation, context, leadership, and processes
Patrick, R., et al. (2011)	Despite multiple barriers, including funding and lack of policy direction, health promotion principles and practices can enable actions on sustainability
Rivera, A. J. (2016)	Healthcare leaders' perceived consciousness did not influence their execution of sustainability initiatives

Figure 6: Summary of key studies describing the social sustainability of healthcare organizations

Practical Tactics for Organizational Sustainability

Issues around health care will always be controversial due to differences in ideological beliefs. The US healthcare system is constructed delicately as a privilege and not as a right to its citizen. This implies that strategies to achieve healthcare organizational success that has worked in in the UK, Europe, and even Latin America studies might not necessarily work in the US. One of the characterizations of the Affordable Care Act is that it is a form of European healthcare. This is partly true. There are fragments and provisions within the health care reform that resembles parts of some European countries. However, there is no European healthcare system. Of all the amenities of the European Union including the ease of trade, unified currency, labor and immigration, healthcare is not one of them. Individual countries within the EU has policies that monitor, implement and enforce rules to make their healthcare systems sustainable. The homogeneity of the US healthcare system puts more responsibility on individual healthcare practices and institutions to adopt policies and make their organizations sustainable.

Figure 7 below summarizes the prevalent themes on organizational sustainability grouped by constructs in literature. Regardless of ideologies or political beliefs, a holistic solution will benefit all healthcare providers but more importantly, patients for long-term success in care delivery. Programs can only deliver benefits is they reach a certain level of maturity (Luke et al. 2014). Furthermore, implementation success does not guarantee a program will be sustainable over an extended period. Sustaining healthcare programs

is challenging, given rapid changes in budgetary and policy climate. The sustainability of programs contributes to the success and sustainability of the organization. The use of practical, continuous improvement tactics among all employee levels fosters the culture and tenets of building a sustainable organization. This literature review shows the breadth of areas covered under sustainability, but a lack of consensus around the determinants in healthcare organizations

Sustainability Constructs	THEMES	STUDY
Social	Adaptability, Leadership, Organization Processes, Employee Consciousness, Communication, Strategy, Culture, Effectiveness, Employee Satisfaction	Coleman et al. (2006), Ramirez, et al. (2013), Fleischer, et al. (2015), Patrick, R et al. (2011), Rivera, A. J. (2016), McAlearney, A. (2006), Reed et al. (2012)
Environmental	Political Awareness, Health Promotion, Community Engagement, Innovation, Climate Change, Energy Efficiency, Policy	Richardson, J.et. al (2015), Sagha Zadeh, R., Xuan, X., & Shepley, M. M. (2016), Faezipour, M. (2014), Lynch, C. J. (2016), Alshehri, A. (2016), Martinez et. al (2017), Ostermeir & Camp (2016)
Economic	Labor Cost, Profit, Technology, Divestures, Staffing Ratio, Business Acumen, Market	Anderson, G. L. (2016), Langabeer, J. R., & Champagne, T. (2016), Chen, H.-F., Bazzoli, G. J., & Hsieh, H.-M. (2009)., Cho, H., & Pucik, V. (2005), Mutter, Wong and Goldfarb (2008), Harmon et. al (2003), Kurtzman et. al (2011). Tietze & Sinha (2003)

Figure 7: Summary of main themes and corresponding constructs found in literature pertaining to sustainability of healthcare organization

Chapter III METHODOLOGY

This chapter presents the methods used to address the dissertation research topic on understanding the factors influencing the perception of organizational sustainability among healthcare professionals. The adopted tool, Program Sustainability Assessment Tool, was renamed Sustainability Assessment Tool for Healthcare Organizations (SATHO) will be reviewed. Subsequently, the recruitment process and data collection through social media will be discussed. The data collected facilitates the analysis of the research questions and a review of the hypotheses.

Research Design

This dissertation study uses a survey-based, online tool; therefore, non-experimental. Demographic characteristics of the sample were organized and summarized through a descriptive design. The study is exploratory because it involves understanding the perception of HCPs on organizational sustainability within their organization. It is cross-sectional because it involves the collection of data at one point in time. A correlational design was used to explore if a relationship exists between the sustainability variables and programs implemented across healthcare organizations.

Survey Tool: Instrument

The instrument utilized for this study is the Program Sustainability Assessment Tool (PSAT). The validated tool has been used to assess the sustainability of public health programs, social service, and clinical care

programs at the community, state, and national level. The tool was developed by researchers at Center for Public Health Systems at Washington University, St. Louis, Missouri was approved for use (Appendix A) but renamed as Sustainability Assessment Tool for Healthcare Organizations (SATHO). Hereafter, the tool will be called SATHO to avoid duplication or confusion with the original tool from Washington University. The assessment is made up of 40 multiple choice questions rating a program or a set of activities across eight sustainability domains, with five items per domain. These domains are referred to as the sustainability variables for this study. The familiarity rating for the variables is on a seven-point Likert scale of 1 = "little to no extent" or 7 = "to a great extent." A 7-point scale was chosen per the tool author to show more variability in the responses. Overall, research confirms that data from Likert items becomes significantly less accurate when the number of scale points drops below five or above seven (Johns, 2010).

Literature supports that the development and implementation of successful healthcare program encompass the eight domains across various organizational and contextual levels. Recall that these factors: environmental support, funding stability, program adaptation, partnerships, organizational capacity, communication, program evaluation and strategic planning all contribute to the long-term sustainable success of any program (Schell et al. 2013). Organizational sustainability, therefore, becomes the aggregated scoring of these factors in a relative manner across healthcare organizations.

Moreover, the higher the score of each variable, the higher level of perceived organizational sustainable by the HCP. For this study, the survey was distributed electronically, on-line with three main sections: six (6) PI-created Qualifying Questions, 40 Sustainability statements based on the 7-point Likert scale, and three (3) PI-created demographics with two (2) Open-Ended Questions. The open-ended questions were not used for these analyses but provided context and themes to the quantitative responses which will be reviewed in the discussion section of this dissertation. Questions posed in the open-ended section included:

- 1) What is your perception of your organizations' adoption of programs under the ACA and its implementation process?
- 2) How can your organization improve its prospect for long-term sustainability?

The qualitative responses to the open-ended questions may also be used for future research. The overall completion time for the survey was approximately 12 minutes. Examples of statements within the survey tool to be ranked under each sustainability variable include:

Environmental Support:

Champions exist who support the program

The program has strong champions with the ability to garner resources.

Funding Stability:

The program exists in a supportive state economic climate

The program is funded through a variety of sources

Partnerships:

Diverse community organizations are invested in the success of the program

The program communicates with community leaders

Organizational Capacity

The program is well integrated into the operations of the organization

Organizational systems are in place to support the various program needs

Program Evaluation

The program has the capacity for quality program evaluation

The program reports short-term and intermediate outcomes

Program Adaptation

The program periodically reviews the evidence base

The program adapts strategies as needed

Communications

The program has communication strategies to secure and maintain public support

Program staff communicate the need for the program to the public

Strategic Planning

The program plans for future resource needs

The program has a long-term financial plan

Sustainability Assessment for Healthcare Institutions

Qualifying Questions for Study

17%

* 2. What is your current role within your organization?

- Nurse
- Primary Care Physician (PCP/GP/FP)
- Specialist Physician
- Administrator
- Manager
- Sr/Director
- SVP/Vice President
- C-Suite/Board Member
- Other (please specify)

* 3. Perceived Sustainability of the ACA related program?
**Sustainability – the ability to maintain a program and its benefits over time*

- Not Sustainable
- Somewhat Sustainable
- Moderately Sustainable
- Very Sustainable
- Not Sure

* 4. Number of Years in an Affordable Care Act (ACA) related program?

- Less than 12 months
- Greater than 12 months

* 5. Number of Years in the Organization?

* 6. What type of healthcare institutions are you with?

- Community

Figure 8: Snapshot of the beginning view for the Sustainability Assessment Tool for Healthcare Organizations (SATHO) survey as appeared on SurveyMonkey®. This illustrates the qualifier questions which was immediately followed by the SATHO questions. A full list of the SATHO questions is available in Appendix B.

Sustainability Assessment for Healthcare Institutions

Sustainability Questions

33%

*** 8 Funding Stability: Establishing a consistent financial base for your program**

	Very Strongly Disagree	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Very Strongly Agree	N/A
The program exists in a supportive state economic climate.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The program implements policies to help ensure sustained funding.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The program is funded through a variety of sources.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The program has a combination of stable and flexible funding.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The program has sustained funding.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 9: Snapshot of the middle view for the Sustainability Assessment Tool for Healthcare Organizations (SATHO) survey as appeared on SurveyMonkey®. This illustrates the Likert-scale questions of the sustainability variables, with each variable having a definition and existing on its own page. These sections were immediately followed by the open-ended questions. A full list of the SATHO questions is available in Appendix B.

Sustainability Assessment for Healthcare Institutions

Open Ended (end Demography)

92%

15. What is the relationship between your healthcare institutions perceived care delivery with the adoption of programs under ACA and its prospects for long term sustainability? - Please explain fully -

16. How can your organization improve its sustainability for long term success? - Please explain fully -

17. What age group best describes you?

18 - 30

31 - 40

41 - 50

51 - 60

60+

18. Please select all degrees and/or certificates that you have obtained with regards to your education?

Associates

Baccalaureate

Masters

MD/DO

Figure 10: Snapshot of the open-ended and demography questions for the Sustainability Assessment Tool for Healthcare Organizations (SATHO) survey as appeared on SurveyMonkey®. The open text fields were for questions to elicit qualitative responses to the Likert scoring. The demographic questions asked participants to disclose their age group, education, and gender. A full list of the SATHO questions is available in Appendix B.

Assessing Validity

According to Fields (2009), validity is evidence that a tool allows for correct inferences about the questions it was determined to answer. On the original SATHO tool, the eight sustainability factors were the output of a developmental study from a comprehensive literature review, input from an expert panel, and the results of a concept mapping exercise. This process was to identify the core domains of the sustainability framework for health program and categorizing ideas with descriptive statistical analysis (Schell et al. 2013). The concept mapping exercise was a mixed methods approach that combined qualitative group processes (brainstorming) from the *Delphi*-panel and helps describe its ideas, representing them graphically. The concept-mapping process included three types of participants (scientists, funders, and practitioners) from several public health areas. The result of the concept mapping process highlighted the eight factors for sustainability included in the survey tool for this dissertation. A confirmatory factor analysis (CFA) was performed to test the hypothesized subscale structure of the survey. Initially, CFA was applied to the entire data set to identify poorly performing items and test for the hypothesized sustainability factors. The poor items were discarded, leading to the final eight identified factors, showing good fit. Poor items (factors) were those that had low variability or poor fit with the intended subscales.

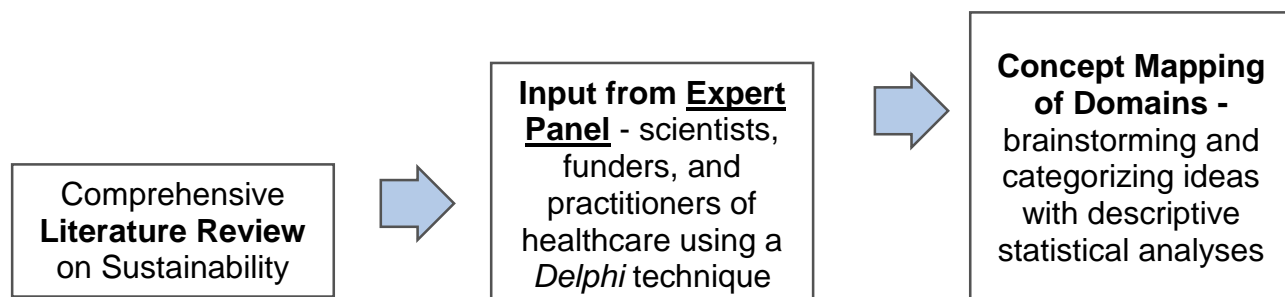


Figure 11: PI generated illustration of the validity test of the research tool as described by Luke et al. (2014).

Assessing Reliability

To test that the tool can produce consistent results under different conditions, a Cronbach's alpha test was performed. The original tool had an average Cronbach's α for the sustainability factors of 0.88, with ranges from 0.79 to 0.92 showing good internal consistency. For SATHO, the PI tested for internal consistency of the tool using the same reliability test for all eight factors of sustainability and the subconstructs (40 individual questions). The reliability test of the variables by the PI was compared to the original author to see if the tool reacts differently in the "general HCP population" used by the PI vs. program managers from the tool author across the variables. The Cronbach's Alpha for SATHO with all eight variables combined was $\alpha = .97$ which is considered excellent by George and Mallery (2011). The PI reliability test had values from good - 0.88 - to excellent - 0.95 - (George and Mallery, 2011). With Cronbach's $\alpha = 0.97$, the tool proved reliable to be measuring the same constructs in the PI population. Although a 0.97 Cronbach's alpha might be considered high, it is reflective of the inter-relatedness of the

variables and the mutually reinforcing nature of the questions on organizational sustainability. This reliability test suggests the sustainability variable are related but differentiated to important healthcare program and organizational characteristics (Luke et al. 2014). The full reliability table for each of sustainability factors (question by question) is available in Appendix G through Appendix N.

Dependent Variable	Cronbach's Alpha
Environmental	0.88
Funding	0.91
Communication	0.94
Evaluation	0.95
Adaptation	0.94
Partnerships	0.94
Strategic Planning	0.92
Organization Capacity	0.93

Figure 12: Summary table of the PI generated reliability test for the 8 Sustainability factors.

A *Priori* G*Power Analysis

An a priori G*power analysis for global effects was calculated to determine the sample size and assert the statistical power of the study (Faul et al. 2009). This study required a total sample size of 132 HCPs for the 4 groups and 8 variables. An effect size of 0.06 was chosen for medium effect appropriate to test the strength of the relationship between the independent and dependent variables. The alpha error was set at 0.05 for the level of significance and to detect the probability of making a type 1 error (false

positive). The power (1-beta err prob) was set at 0.8, which is the probability of detecting a true relationship or group difference. Statistical power is the likelihood a study will detect an effect when there is an effect there to be detected. Therefore, if the statistical power ends up being high, the probability of making a type II error - concluding there is no effect when in fact there is one, goes down (Ellis, 2010).

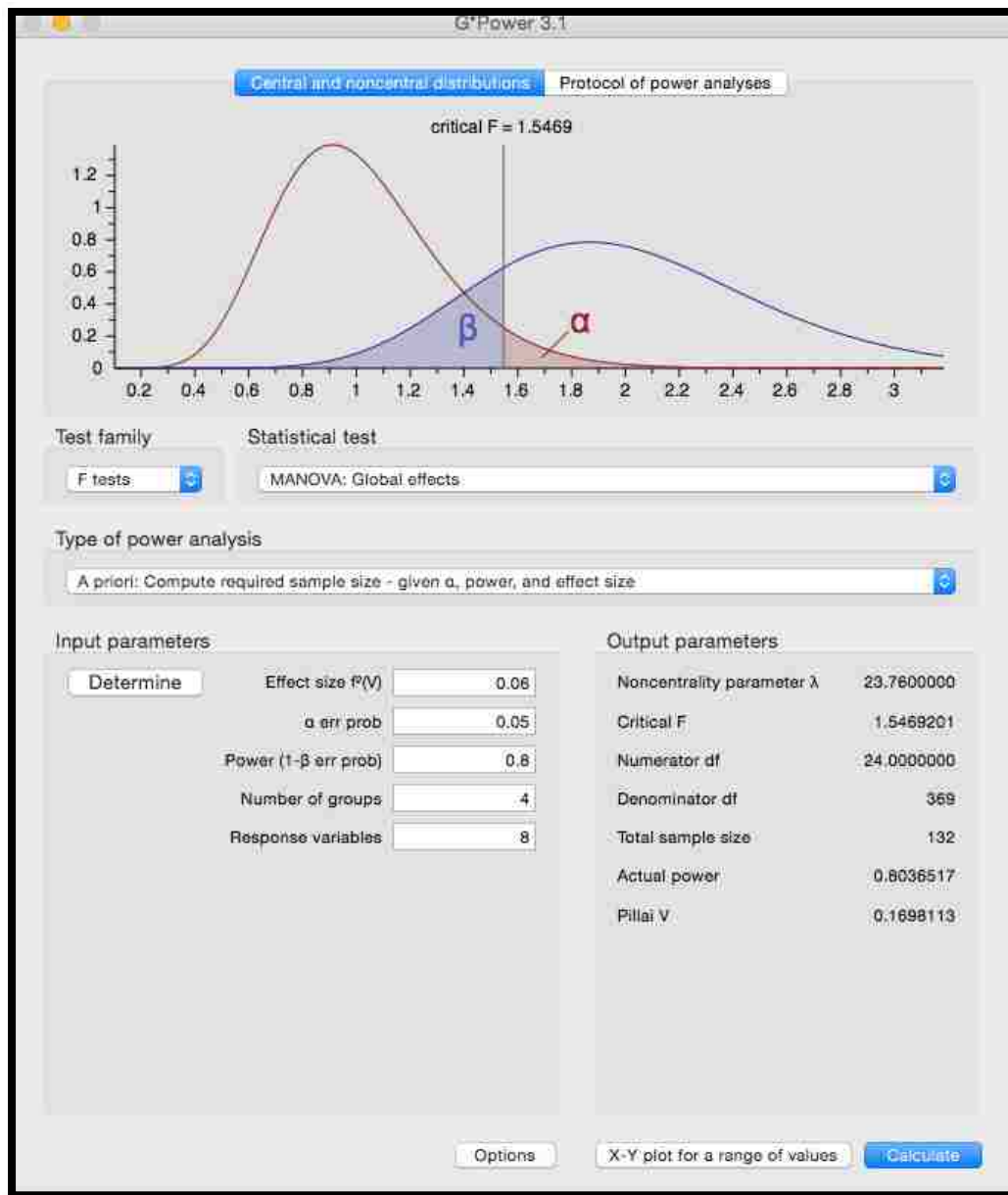


Figure 13: The A priori G*Power output to determine the sample size. With an effect size of 0.06 and alpha set at .05, power of .80, the expected sample size is 132 with the 4 perception groups (unsustainable, moderately sustainable, somewhat sustainable and very sustainable) and the 8 sustainability factors (funding, evaluation, capacity, adaptability, partnerships, environmental support, communication and strategic planning).

Study Recruitment: Inclusion/Exclusion Criteria

To be included in the study, participants had to be employed in a healthcare organization as a decision maker or non-decision maker - Management, Director/VP, C-Suite. This inclusion criterion is particularly important for a few reasons. As the study objective was to measure the perception of organizational sustainability, the literature suggests both leaders and middle managers in healthcare influence the implementation of healthcare programs. As top leaders develop the overall strategy of organizations, managers diffuse and synthesize information and mediate with day-to-day activities to ensure successful implementation (Birken et al., 2012). Due to the complexity of care delivery, a collaborative, flexible and adaptive culture should exist between members and functional units with leadership promoting the organization's shared vision and building a supportive environment. Moreover, decision-making in healthcare organizations varies significantly by setting. For example, in a physician's office, the office supervisor becomes a significant decision maker of the practice operations; whereas, a care coordinator becomes more important in a long-term care facility and outpatient clinics to ensuring quality patient care. In hospitals and healthcare systems, roles of administrators and managers are clearly delineated, but the above shows the variation of roles and titles across healthcare organizations. This dynamic is further discussed in the

results section on roles of respondents in this study as well as the discussion section.

Other inclusion criteria include that the participant's affiliated health care organization has adopted a program under the 2010 Affordable Care Act and that the individual has been in their role greater than 12 months. Access to the internet and a computer is important as survey responses were only collected electronically. The ability to speak, write and read English was also a criterion, as well as participants being at least 18 years or older.

Participants were excluded if they did not meet all of the above inclusion criteria.

Inclusion	Exclusion
Employed in a healthcare organization as a decision maker or non-decision maker - Management, Director/VP, C-Suite, etc.	Is not Employed in a healthcare organization and not a decision maker - Management, Director/VP, C-Suite
Affiliated healthcare organization has adopted a program under the 2010 Affordable Care Act	Affiliated healthcare organization has not adopted a program under the 2010 Affordable Care Act
Individual must have been in their role >12 months	An individual has not been in their role >12 months
Access to the internet and a computer	No Access to the internet and a computer
Ability to speak, read and write English	Non-English speaking/reading/writing individuals
Must be 18 years or older	Individuals below 18 years of age

Figure 14. Summary of the Inclusion and Exclusion Criteria for participants in the study

Data Collection

After approval by the Seton Hall University Institutional Review Board (IRB) (Appendix C), survey participants were recruited through a purposive, convenient and snowball sampling. Access to the sampling population was through social media platforms of LinkedIn®, Facebook® and Twitter™. The solicitation was based on the PI membership to professional association groups on the different social media platforms. These restricted groups require administrative permission to join and participate in professional topics of interest. Groups within these platforms include the Healthcare Executive Network (HEN), Healthcare Industry Professional Group (HIPG) and Hospital Administration and Healthcare Executives (HAHE). The PI activity on social media included postings of other related research articles on the topic of organizational sustainability to garner interest to garner interest from other group members. The exhaustive list of social media groups is available in Appendix D.

In addition to the social media groups, the PI reached out to other professional organizations through electronic mail. Access to this group was through the publicly available contact information of the group website and email addresses. This method created a snowball sampling effect where HCPs that met the inclusion criteria participated in the study. According to Hek and Moule (2006), snowball sampling will attract people with like characteristics, interest, and behaviors to belong to the same association or

groups. Prospecting of these groups included the national associations as well as state chapters. A copy of the solicitation letter (Appendix F) was shared via email with the President of the association encouraging distribution to other group members. Examples of these group include American Organization of Nurse Executives (AONE), American Association for Physician Leadership, and American Nurses Association (ANA) – *and all state chapters with a website and publicly available electronic mail contact information*. Appendix E shows the full list of professional association with publicly available contact details.

As shared earlier, survey research on healthcare professionals is different from any other kind of respondents. Because the survey responses were anonymous and not collected from named individuals, it is not known how many responses specifically came from which social media outlet (e.g., Facebook®, Twitter™, and LinkedIn®). For Facebook® as a recruitment method, the PI had to be approved by the administrators of closed group pages. PI had to provide information on the parameters of the study and why there was an interest in joining the group since the PI was not a nurse practitioner or physician assistant, etc. Once approved, PI was able to join

the closed group and share a brief post to the page containing the link to the study.



Figure 15. Sample Facebook® post by the PI in a closed group page of Case Managers sharing the survey link with a brief description of the study. The group administrator’s name has a black strikethrough for privacy purposes.

For Twitter™, the PI utilized tweets as a recruitment method. These tweets were directed at professional groups and trending topics. Trending topics are keywords within the study which attracts and professional of different groups with the use of a hashtag. Per Twitter policy, tweets are usually one sentence long and concise enough for meaningful understanding. Equally important are the “Likes” and “Retweets” by other professionals within the networking groups. These activities appear as news feeds of member groups within the social network update. This generation of feeds and content is similar for all social media sites including the one utilized by the PI.

These “feeds” lead to further exposure with more potential participants to the study.

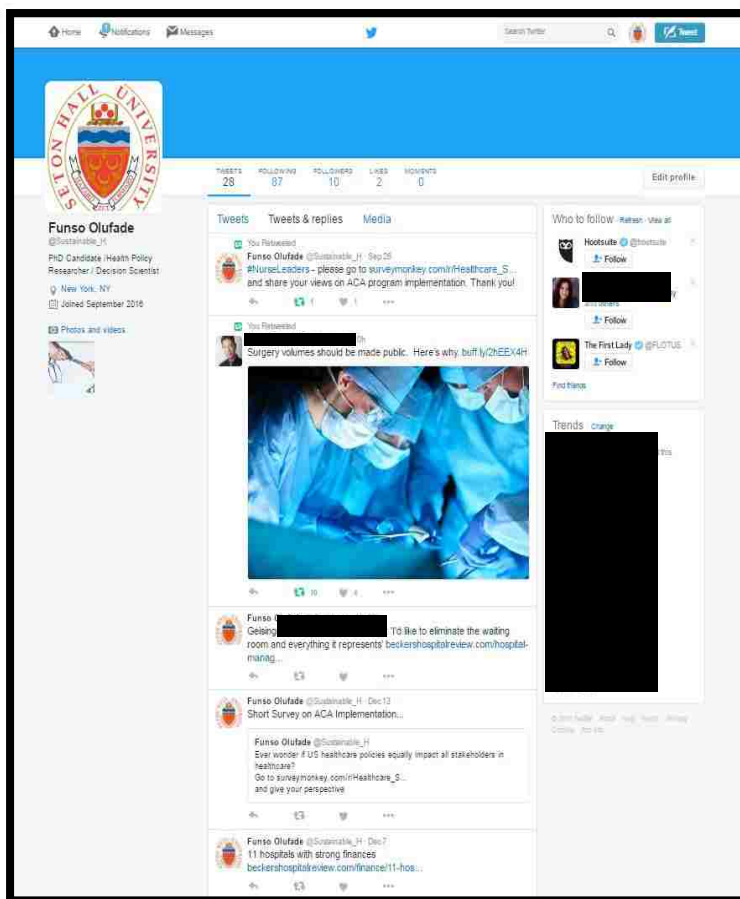


Figure 16. A sample snapshot of the PI postings and retweets on Twitter™ utilizing articles by leaders within the healthcare industry and other relevant research topics to attract participants to the study. The black strikethrough on names is for privacy purposes.

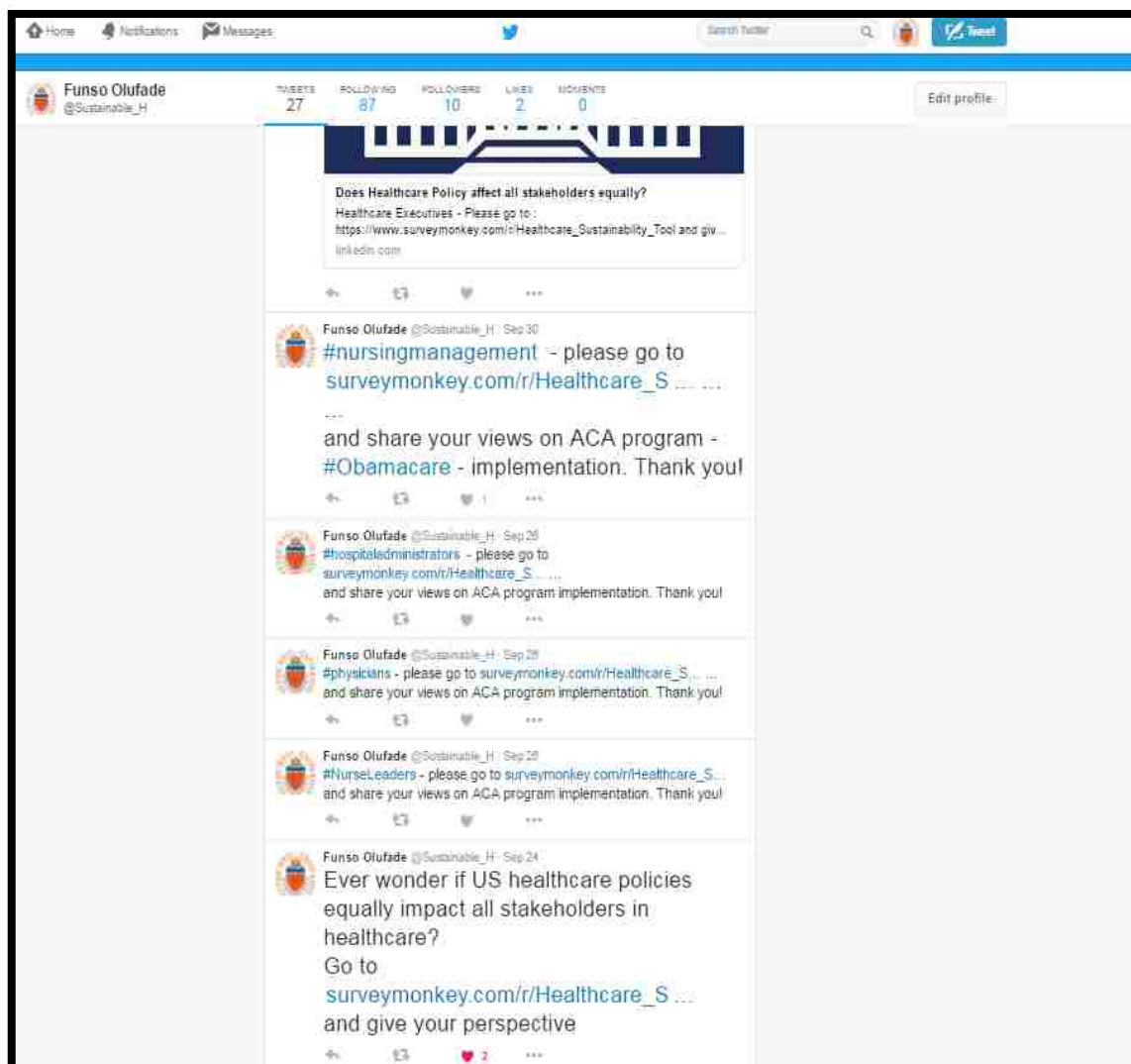


Figure 17. Examples of tweets used by PI on Twitter™ with several keywords as hashtags (#). Please note the different hashtags (#) which include professional groups as well as trending topics.



Figure 18. A sample snapshot of a LinkedIn® postings by the PI in a closed group of professionals. Similar to Facebook®, a link for the survey was shared encouraging participation and approved by the group administrator. The “thumbs up” icon is similar to “Likes” in Twitter™ whereby exposure via feeds to the study from more potential participants becomes more likely. The group administrator’s name has a black strikethrough for privacy purposes

Data Coding and Analysis

Upon the completion of data collection, data from the SurveyMonkey® website was exported into Microsoft Excel for formatting. The purpose of the formatting was to review all data fields and eliminate all non-data. Within Excel, the column variables and cases were also created to identify the first row of the data field as column headers. Once the formatting was complete,

the excel file was transferred into SPSS software version 23.0 (IBM, 2015). The final data set in SPSS had 59 columns and 160 rows making a total of 9,440 records. Figure 18 shows a snapshot of the initial imported data set before coding. The PI then created numeric variables from string variables for all relevant fields (Figure 19). Fields for the qualifying questions such as Length of Employment, Program Perception (independent variable), Type of Organization, were coded as nominal measures. The column headers for the Likert scale data (survey questions) were renamed to be more succinct to fit the column width and ease of view and read. The logic adopted here was to use an acronym for sustainability factor, followed few keywords of the survey statements. Example include “ES_Champion” for Environmental Support and if champions existed that supported program implementation. The Likert data was coded as ordinal measures. For the independent variables on the perception of sustainability, coding was done on a scale of 0 to 4: Not Sure (0), Not sustainable (1), Somewhat Sustainable (2), Moderately Sustainable (3), Very Sustainable (4). Perception group 0 and 1 were eventually merged by the PI to create four equal-sized groups. The rationale being an HCP with managerial competence not knowing (group 0) how sustainable their organization is, qualifies as unsustainable (group1). Likert scale responses were coded from 0 to 7: N/A (0), Very Strongly Disagree (1), Strongly Disagree (2), Disagree (3), Neutral (4), Agree (5), Strongly Agree (6), Very Strongly Agree (7). There was no need for reverse coding of the data set as

the Likert statements were in a positive continuum scale of organizational sustainability.

The next step was the computation of the scales from each sustainability variable based on the Likert statements. Since each variable had five each, the summation of the Likert response for each variable provided the overall score for the perception of that variable. Eight additional columns were added into SPSS named “Total_(variable)” and a ninth column for the total tool as a scale measure. The final summing of the computation led to the abridged database used for the analysis in this study.

	Employment_HC	Role	Other_Role	ACA_Perception	YearsACA	ProfessionalYears	OtherYears	HC_Type	Other_HC_Type	ES_Champions	ES_Champresouces	ES_LeadershipWithin	ES_LeadershipOut	ES_PublicSupport	ES_EconomicSupport	ES_ImplementSustained	ES_VarietyofFunds	ES_Sustainable	ES_Flexibility
47	YES	Specialist P...		Not Sustain...	Greater tha...	20+ years		State		Disagree	Disagree	Disagree	Disagree	Disagree	Disagree	Disagree	Strongly Disagree	Strongly Disa...	
48	YES	Nurse		Not Sustain...	Greater tha...	5-10 years		Community		Agree	Agree	Very Stron...	Neutral	Neutral	Very Stron...	Very Strongl...	Very Strongly Di...	Disagree	
49	YES	Other (plea...	Home caregiv...	Moderately ...	Less than 1...	5-10 years		Community	Private	Strongly Agree	Neutral	Neutral	Neutral	Agree	Neutral	Disagree	Very Strongly Di...	Disagree	
50	YES	Nurse		Somewhat S...	Less than 1...	1-5 years		State		Neutral	Neutral	Neutral	Neutral	Disagree	Strongly Dis...	Neutral	Neutral	Neutral	
51	YES	Other (plea...	nurse practiti...	Somewhat S...	Greater tha...	1-5 years		State		Agree	Agree	Neutral	Neutral	Neutral	Agree	Agree	Agree	Agree	
52	YES	Primary Car...		Not Sustain...	Greater tha...	1-5 years		Community		Agree	Neutral	Disagree	Disagree	Neutral	Neutral	Neutral	Neutral	Neutral	
53	YES	Primary Car...		Not Sustain...	Greater tha...	5-10 years		Community		Strongly Disagree	Strongly Disa...	Strongly Di...	Disagree	Very Str...	Disagree	Neutral	Neutral	Agree	
54	YES	Nurse		Very Sustain...	Less than 1...	15-20 years		Community		Neutral	Neutral	Agree	Agree	Agree	Agree	Agree	Agree	Agree	
55	YES	Nurse		Not Sustain...	Less than 1...	10-15 years		State		Very Strongly Dis...	Very Strongly...	Very Stron...	Very Stron...	Very Str...	Very Stron...	Very Strongl...	Very Strongly Di...	Very Strongly...	
56	YES	Other (plea...	Hospital Unit...	Not Sure	Greater tha...	15-20 years		State		Very Strongly Agree	Very Strongly...	Very Stron...	N/A	Very Str...	Agree	Agree	Agree	N/A	
57	YES	Other (plea...	Dental assist...	Not Sure	Greater tha...	10-15 years		State		Agree	Agree	Agree	Agree	Agree	Agree	Agree	Very Strongly Ag...	Agree	
58	YES	Other (plea...	Staff member	Not Sure	Less than 1...	5-10 years		Community		Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	
59	YES	Other (plea...	staff RN	Not Sustain...	Less than 1...	Other (please... I have Kaiser...		Community	Kaiser h...	Very Strongly Agree	Agree	Agree	Agree	Very Stron...	Strongl...	Strongly Di...	Very Strongl...	Disagree	Strongly Disa...
60	YES	Manager		Moderately ...	Greater tha...	20+ years		Community		Agree	Agree	Agree	Neutral	Neutral	Neutral	Neutral	Agree	Neutral	
61	YES	Other (plea...	therapist	Moderately ...	Greater tha...	15-20 years		Community	communi...	Agree	Neutral	Neutral	Strongly A...	Strongl...	Neutral	Neutral	Agree	Agree	
62	YES	Other (plea...	employee	Not Sustain...	Greater tha...	15-20 years		Community		Neutral	Disagree	Disagree	Disagree	Disagree	Disagree	Disagree	Disagree	Disagree	
63	YES	Manager		Somewhat S...	Less than 1...	20+ years		Community		Agree	Disagree	Disagree	Agree	Agree	Agree	Agree	Neutral	Neutral	
64	YES	Other (plea...	Medical assist...	Moderately ...	Greater tha...	1-5 years		Community		Disagree	Very Strongly...	Very Stron...	Disagree	Very Str...	Strongly A...	Very Strongl...	Neutral	Strongly Disa...	
65	YES	Other (plea...	CNA HHA	Somewhat S...	Less than 1...	10-15 years		Community		Very Strongly Agree	Very Strongly...	Very Stron...	Very Stron...	Strongl...	Very Stron...	Agree	Very Strongly Ag...	Very Strongly...	
66	YES	Sr/Director		Somewhat S...	Greater tha...	15-20 years		Community		Strongly Agree	Agree	Strongly A...	Strongly A...	Strongl...	Strongly A...	Strongly Agr...	Very Strongly Ag...	Agree	
67	YES	Other (plea...	Technician	Somewhat S...	Less than 1...	20+ years		Community		Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	
68	YES	Other (plea...	RN clinical su...	Very Sustain...	Greater tha...	1-5 years		Community		Very Strongly Agree	Very Strongly...	Very Stron...	Very Stron...	Very Str...	Very Stron...	Very Strongl...	Strongly Agree	Very Strongly...	
69	YES	Other (plea...	Registered N...	Not Sustain...	Less than 1...	5-10 years		State		Agree	Disagree	Agree	Agree	Strongl...	Strongly Di...	Strongly Dis...	Agree	Disagree	
70	YES	Other (plea...	CNS	Very Sustain...	Greater tha...	20+ years		Community		Very Strongly Agree	Very Strongly...	Very Stron...	Very Stron...	Very Str...	Very Stron...	Very Strongl...	Very Strongly Ag...	Very Strongly...	
71	YES	Other (plea...	Physician	Somewhat S...	Greater tha...	1-5 years		State		Agree	Agree	Neutral	Neutral	Strongl...	Neutral	Agree	Agree	Neutral	

(IBM, 2015)

Figure 19. Pre-Coded Data: Main database spreadsheet after import into SPSS v.23 from SurveyMonkey® via Microsoft Excel.

	Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure	Role
1	Employment...	Numeric	40	0	I currently wor...	{1, YES}...	None	8	Center	Ordinal	Input
2	Role	Numeric	40	0	What is your cu...	{0, Other}...	None	8	Center	Ordinal	Input
3	Other_Role	String	40	0	Other (please s...	None	None	1	Center	Nominal	Input
4	ACA_Perce...	String	40	0	Perceived Sust...	{0, Not Sure...	None	8	Center	Nominal	Input
5	YearsACA	String	40	0	Number of Yea...	{1, Less tha...	None	8	Center	Nominal	Input
6	Professiona...	String	36	0	Number of Yea...	None	None	8	Center	Nominal	Input
7	OtherYears	String	36	0	Other (please s...	None	None	1	Center	Nominal	Input
8	HC_Type	String	40	0	What type of h...	{1, State}...	None	8	Center	Nominal	Input
9	Other_HC_T...	String	39	0	Other (please s...	None	None	1	Center	Nominal	Input
10	ES_Champlo...	Numeric	40	0	Champions exi...	{0, N/A}...	None	8	Right	Ordinal	Input
11	ES_ChampR...	Numeric	40	0	The program h...	{0, N/A}...	None	8	Right	Ordinal	Input
12	ES_Leaders...	Numeric	40	0	The program h...	{0, N/A}...	None	8	Right	Ordinal	Input
13	ES_Leaders...	Numeric	40	0	The program h...	{0, N/A}...	None	8	Right	Ordinal	Input
14	ES_PublicSu...	Numeric	38	0	The program h...	{0, N/A}...	None	8	Right	Ordinal	Input
15	FS_Economi...	Numeric	40	0	The program e...	{0, N/A}...	None	8	Right	Ordinal	Input
16	FS_Impleme...	Numeric	40	0	The program i...	{0, N/A}...	None	8	Right	Ordinal	Input
17	FS_VarietyF...	Numeric	40	0	The program is...	{0, N/A}...	None	8	Right	Ordinal	Input
18	FS_StableFl...	Numeric	40	0	The program h...	{0, N/A}...	None	8	Right	Ordinal	Input
19	FS_Sustaine...	Numeric	34	0	The program h...	{0, N/A}...	None	8	Right	Ordinal	Input
20	Part_Divers...	Numeric	40	0	Diverse commu...	{0, N/A}...	None	8	Right	Ordinal	Input
21	Part_Talkw...	Numeric	40	0	The program c...	{0, N/A}...	None	8	Right	Ordinal	Input
22	Part_Leader...	Numeric	40	0	Community lea...	{0, N/A}...	None	8	Right	Ordinal	Input
23	Part_Passio...	Numeric	40	0	Community me...	{0, N/A}...	None	8	Right	Ordinal	Input
24	Part_Engag...	Numeric	40	0	The community...	{0, N/A}...	None	8	Right	Ordinal	Input

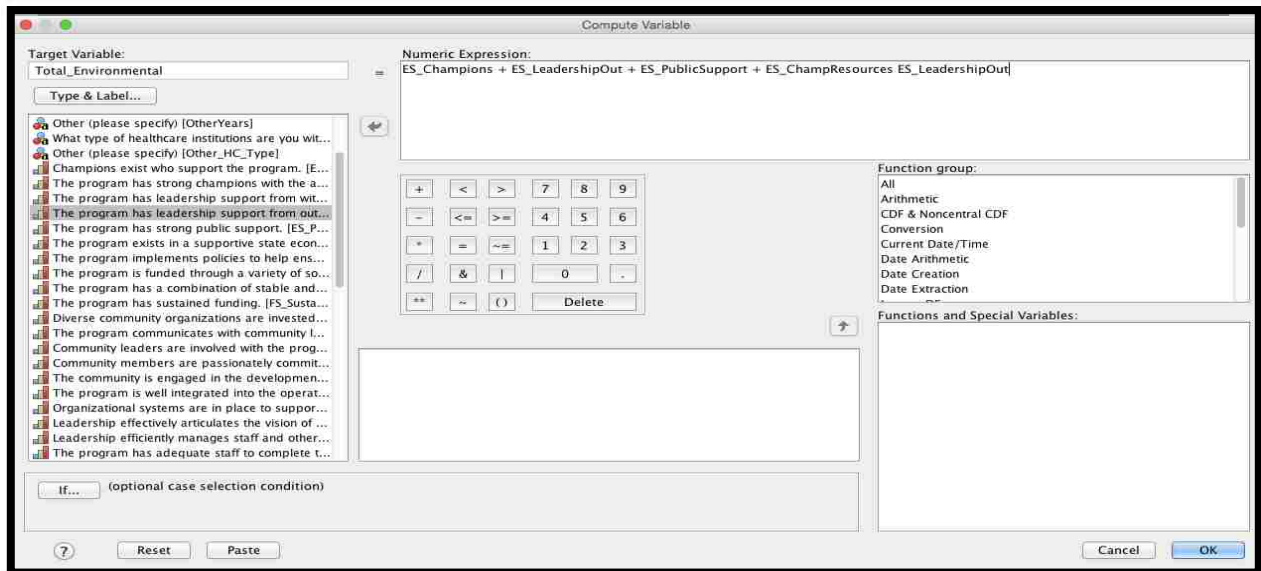
(IBM, 2015)

Figure 20. Variable view of Coded data by PI into Numeric variables from string variables for statistical analysis.

	Employment_HC	Role	OI_Hc	ACA_Perception	YearsACA	Professional_Years	OI_Hc	HC_Type	OI_Hc	ES_Champions	ES_ChampResources	ES_LeadershipWithin	ES_LeadershipOut	ES_PublicSupport	FS_EconomicSupport	FS_ImplementationSustainedFund	FS_VarietyFundSource	FS_StableFunding	FS_SustainedFunding	Part_DiverseCommunit	Part_TailorLea
1	1	0	...	4	2	4	2	...	6	6	6	6	6	5	5	5	6	5	4	5	
2	1	4	...	4	2	3	2	...	1	1	1	1	1	1	4	5	5	5	4	5	
3	1	1	...	2	2	1	2	...	4	2	2	1	5	5	5	5	4	3	5		
4	1	0	...	1	2	3	2	...	6	6	6	6	6	6	6	6	6	6	6	7	
5	1	5	...	2	1	4	2	...	7	7	5	5	5	5	6	7	3	7	4	5	
6	1	3	...	4	2	2	2	...	2	4	5	5	4	5	6	4	5	5	5	4	
7	1	1	...	4	1	2	1	...	6	6	6	6	6	6	6	6	6	7	6	6	
8	1	0	...	0	1	0	...	...	0	0	7	7	7	7	0	7	7	6	7	0
9	1	0	...	3	2	4	2	...	6	6	7	7	6	6	6	5	5	5	5	6	
10	1	2	...	3	2	3	1	...	1	1	1	1	1	1	1	1	1	1	1	1	
11	1	0	...	2	2	4	2	...	4	5	5	4	4	3	4	5	4	5	3	3	
12	1	0	...	3	1	1	2	...	5	4	5	5	6	2	3	3	2	1	5	5	
13	1	2	...	2	2	4	2	...	4	5	5	4	4	4	4	5	4	4	6	6	
14	1	5	...	0	1	1	2	...	4	4	4	4	4	4	4	4	4	4	4	4	
15	1	2	...	1	1	1	2	...	5	5	5	7	3	5	5	2	6	5	4	4	
16	1	0	...	2	1	1	1	...	4	4	4	4	4	4	4	4	4	4	4	4	
17	2	0	...	3	2	3	1	...	5	5	5	5	4	3	4	5	5	4	4	4	
18	1	2	...	3	1	1	2	...	6	6	6	6	6	6	4	4	5	5	5	5	
19	1	1	...	2	2	4	1	...	4	4	4	4	4	4	4	4	4	4	0	0	
20	1	2	...	4	2	2	1	...	2	2	2	2	2	2	3	3	3	3	3	5	
21	1	0	...	4	2	1	2	...	6	6	6	6	6	5	5	5	5	5	5	5	
22	1	4	...	1	2	2	2	...	3	3	2	6	2	2	2	1	4	2	1	1	

(IBM, 2015)

Figure 21: Coding of Data: Main Database Spreadsheet Post-coding. Coding: Examples -Employment in Healthcare 1-Yes, 2-No; Perception (1-4 - Not Sustainable to Very Sustainable); Likert Scale items 1 through 7 (Too Little or to no Extent through To a Very Great Extent



(IBM, 2015)

Figure 22: Coding of the Data: Sample Data Computation Function. Creation of new target variable labeled (Total_Environmental) and computed through the summation of numeric expression of the addition of all variables associated with the dependent variable

Chapter IV

RESULTS

Introduction

The research question for this study was as follows: What factors influence the perception of Organizational Sustainability among Healthcare Professionals (HCPs) post the 2010 Affordable Care Act? This chapter focuses on the results of the statistical analyses of this dissertation study.

Respondents Characteristics

Recall, the a-priori G-power was for 132 participants, 301 respondents joined the survey with a 53% completion rate - resulting in 160 complete responses (ex-demographics). Group breakdown of the 160 HCPs with complete responses showed relative equality. The sample consisted of healthcare practitioners and administrators with varying perception levels of sustainability. Table I below shows the group break down with the largest perception group having 46 respondents and the smallest group "Very Sustainable" having 33. According to Stevens (1999), groups are considered generally equal as long as the larger group is not 1.5 times greater. The study closing with 160 completed responses is also 28 responses greater than the a priori.

Table VII

Frequency and Percentage of the groups - Independent variables (IV): Not Sure/Unsustainable, Somewhat Sustainable, Moderately Sustainable and Very Sustainable.

Perception Levels with 4 groups

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Sure or Unsustainable	44	27.5	27.5	27.5
	Somewhat Sustainable	46	28.7	28.7	56.3
	Moderately Sustainable	37	23.1	23.1	79.4
	Very Sustainable	33	20.6	20.6	100.0
	Total	160	100.0	100.0	

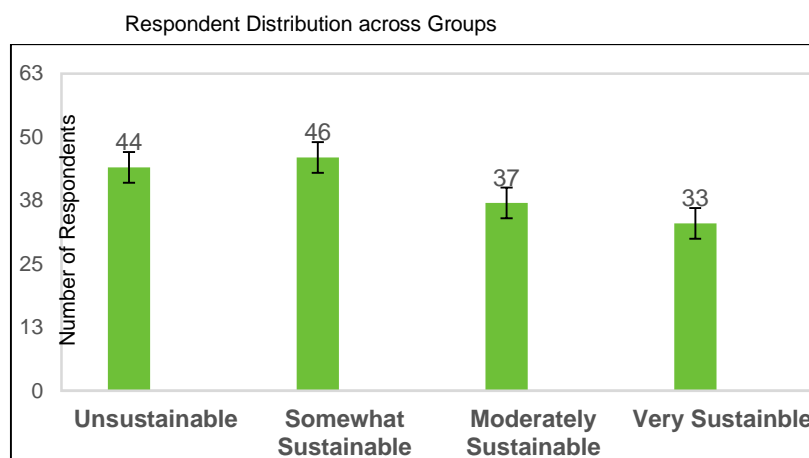


Figure 23: Bar Graph illustrating the respondents overall perception of their organizational sustainability. These results are a qualifying question for the groups of the independent variable.

Frequency and Percentage of Role by Respondents

The study recruited all roles within healthcare delivery as they contribute to the implementation of programs and its' sustainability. Broken out by individual role type, most respondents were Managers (18%) and mid-

level Management - Sr. /Director - (11%) at healthcare institutions (Table II). The smaller groups were VPs/SVPs (3%) and C-Suite Members (6%). The “Other” group was a default for 48% of respondents as administrative titles in many institutions vary and further highlights diversity of roles in this study. Other title included: Social Worker, Case Managers, Nurse Educator, Revenue/Claims Expert, Counselor, System Head, Department Chair, Section Chief, Physical Therapist (PT), and Occupational Therapists (OT).

Table VIII
Frequency and Percentage of the Roles of Respondents by Profession

What is your current role within your organization?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Other	77	48.1	48.1	48.1
	Manager	29	18.1	18.1	66.3
	Nurse	12	7.5	7.5	73.8
	PCP/GP/FP	4	2.5	2.5	76.3
	Specialist Physician	5	3.1	3.1	79.4
	Administrator	2	1.3	1.3	80.6
	Sr/Director	17	10.6	10.6	91.3
	SVP/Vice President	5	3.1	3.1	94.4
	C-Suite/Board Member	9	5.6	5.6	100.0
	Total	160	100.0	100.0	

To further assert the credibility of the respondents on healthcare organizational sustainability, 70% of the respondents have had greater than twelve month experience with the healthcare program there were assessing

(Table III). Moreover, the healthcare practitioners in this study have longevity in their roles. The majority (54%) of the respondents have worked at their healthcare organization between 1 and 10 years, while 28% have had 20+ years of experience as a healthcare professional. The smallest group (2%) had less than 1 year of being with their organization (Table IV).

Table IX

Number of Respondents Years in the healthcare Program

		Number of Years in program?			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 12 months	49	30.6	30.6	30.6
	Greater than 12 months	111	69.4	69.4	100.0
	Total	160	100.0	100.0	

Table X

Respondents Years in their Profession coded as – Less than 1 year (0), 1-5 years (1), 5-10 years (2), 10-15 years (3), 20+ years (4).

		Number of Years in the Organization?			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	4	2.5	2.5	2.5
	1	58	36.3	36.3	38.8
	2	29	18.1	18.1	56.9
	3	25	15.6	15.6	72.5
	4	44	27.5	27.5	100.0
	Total	160	100.0	100.0	

Gender of Respondents and Geographic Location

As presented in chapter 2, a total of 160 fully completed responses were available for analysis. Of the total sample, the percentage breakdown was 77% Female vs. 23% male (Table V). This ratio is not reflective of the general population. According to the American Medical Association, the ratio of physician breakdown by gender was reported as 66% male and 33% female (AMA, 2015). Additionally, the Health Resources and Service Administration has a ratio of nurses by gender as 91% female and 9% male (HRSA, 2014).

Table XI
Gender Breakdown of Respondents

What is your Gender?				
	Frequency	Percent	Valid Percent	Cummulative Percent
Male	37	23.3	23.3	23.3
Female	123	76.7	76.7	100.0
Total	160	100.0	100.0	

Additionally, sample participants were evenly distributed across the US with the North East having the highest at 22% and South East and Northwest having the lowest at 5%.

Table XII
Geographic Location of Respondents

What region of the US are you located?					
Region	States	Frequency	Percent	Valid Percent	Cummulative Percent
Pacific	CA, NV, Arizona, New M	17	10.1	10.1	10.1
Mountain	Colorado, Utah	14	8.9	8.9	19.0
West South Central	Texas, Oklahoma, Arizon	24	14.9	14.9	33.9
East South Central	Kentucky, Tennessee, Ar	7	4.5	4.5	38.4
South Atlantic	Florida, Georgia	24	14.9	14.9	53.3
West North Central	Nebraska, Kansas, N.Da	7	4.5	4.5	57.8
East North Central	NJ, NY, PA, WV, OH	33	20.9	20.9	78.7
Middle Atlantic	DE, DC, MD, Virginia	19	11.9	11.9	90.6
New England	Maine, NH, VT, MS, CT	14	8.9	8.9	100.0
Total		160	100	100.0	

Research Questions 1-8

To answer research questions 1 through 8: Is there a relationship between the dependent variables (8) and Healthcare Organizations Sustainability? – parametric correlational statistics (Pearson r) was calculated. Pearson correlation tests the whether or not a relationship exists — between the individual computation scores for factors of sustainability – 8 dependent variables (DV) - Environmental, Funding, Communication, Evaluation, Adaptation, Strategic Planning, Organization Capacity, Partnerships and the perception of sustainability groups (IV). The correlation matrix was ran with the 8 dependent variables vs. perception groups in the first highlighted column but also against each other (Figure 23). Significance was considered at the .01 level because of 2 tailed non-directional hypotheses. Therefore, as scores for each of the variables increases, so does the perceived sustainability of the healthcare programs. For this study, the Unsustainable group was positioned as the lowest perception level followed

by the Somewhat Sustainable groups then the moderately sustainable group, with the Very Sustainable group having the highest perception level of organizational sustainability.

Table XIII
Pearson Correlation of the 8 Dependent Variables with significance considered at .01

		Correlations								
		Perception Levels with 4 groups	Total_Environmental	Total_Funding	Total_Partnerships	Total_OrganizationalCapacity	Total_Adaptation	Total_Communication	Total_StrategicPlanning	Total_ProgEvaluation
Perception Levels with 4 groups	Pearson Correlation	1	.281**	.361**	.309**	.347**	.329**	.325**	.425**	.289**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000	.000
	N	160	160	160	160	160	160	160	160	160
Total_Environmental	Pearson Correlation	.281**	1	.677**	.683**	.689**	.643**	.581**	.522**	.519**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000	.000	.000
	N	160	160	160	160	160	160	160	160	160
Total_Funding	Pearson Correlation	.361**	.677**	1	.558**	.643**	.643**	.679**	.604**	.525**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.000	.000
	N	160	160	160	160	160	160	160	160	160
Total_Partnerships	Pearson Correlation	.309**	.683**	.558**	1	.711**	.706**	.683**	.569**	.642**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000	.000	.000
	N	160	160	160	160	160	160	160	160	160
Total_OrganizationalCapacity	Pearson Correlation	.347**	.689**	.643**	.711**	1	.852**	.723**	.750**	.777**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000	.000	.000
	N	160	160	160	160	160	160	160	160	160
Total_Adaptation	Pearson Correlation	.329**	.643**	.643**	.706**	.852**	1	.747**	.694**	.784**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000	.000	.000
	N	160	160	160	160	160	160	160	160	160
Total_Communication	Pearson Correlation	.325**	.581**	.679**	.683**	.723**	.747**	1	.641**	.653**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000		.000	.000
	N	160	160	160	160	160	160	160	160	160
Total_StrategicPlanning	Pearson Correlation	.425**	.522**	.604**	.569**	.750**	.694**	.641**	1	.768**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000		.000
	N	160	160	160	160	160	160	160	160	160
Total_ProgEvaluation	Pearson Correlation	.289**	.519**	.525**	.642**	.777**	.784**	.653**	.768**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	
	N	160	160	160	160	160	160	160	160	160

** . Correlation is significant at the 0.01 level (2-tailed).

The ranges for strength of correlations between variables vary in the following ways: Small Correlation (0.1 to 0.3); Moderate Correlation (0.3 to 0.7) and Strong Correlation (0.7 to 1) (Field, 2009, IBM, 2015). The summary of the above Pearson Correlation Matrix is as follows:


- All 8 variables had statistical significance as indicated by the asterisks and with values lower than 0.01 suggesting the observed correlation exists in the population.
- The R - values in the 1st column indicate that there is a genuine positive relationship between the 8 dependent variables and perceived sustainability.
- Most of the variables were in the moderate rate correlation, except for Environmental Support and Evaluation.








Given the correlation results, the PI fails to reject the alternate for Hypotheses 1 through 8 that there is a relationship between the 8 sustainability variables and perceived healthcare organizational sustainability. A review of the relationship hypothesis is presented in Table VIII below.

RQ: Is there a RELATIONSHIP between the (8) dependent variables (Environmental Support, Funding, Evaluation, Adaptation, Communication, Strategic Planning, Organization Capacity, Partnerships) - and Organizational Sustainability?

Ha: There is a relationship between the (8) dependent variables (Environmental Support, Funding, Evaluation, Adaptation, Communication, Strategic Planning, Organization Capacity, Partnerships) - and Organizational Sustainability?

Table XIV

Review of the PI hypotheses 1-8 based on the Pearson correlation with the  mark indicating Failure to Reject the Hypotheses.

Hypotheses #	Relationship	Sustainability Factors	Hypotheses	Results
H1	Positive	Environmental Support		r=0.28, p<.001 small relationship
H2	Positive	Funding Stability		r=0.36, p<.001 moderate relationship
H3	Positive	Program Adaptation		r= 0.32, p<.001 moderate relationship
H4	Positive	Program Evaluation		r=0.29, p<.001 small relationship
H5	Positive	Communication		r = 0.32, p<.001 moderate relationship
H6	Positive	Partnerships		r= 0.31, p<.001 moderate relationship
H7	Positive	Strategic Planning		r=0.42, p<.001 moderate relationship
H8	Positive	Organizational Capacity		r = 0.34, p<.001 moderate relationship

According to Fields, (2009) although statistically significant, r values <.3 suggest a weak correlation between independent variables and the dependent variable. This implies that in spite of new healthcare program implementation, HCPs struggle to connect the two weakest correlated variables to the organizational sustainability - evaluation of programs and having environmental support. Additionally, strategic planning (r =0.42, p<.001) had the highest-level correlation to the perception of sustainability. This result enable the ranking of the sustainability factors (Figure 23) based on the varying strength of the correlation between the 8 variables and sustainability.

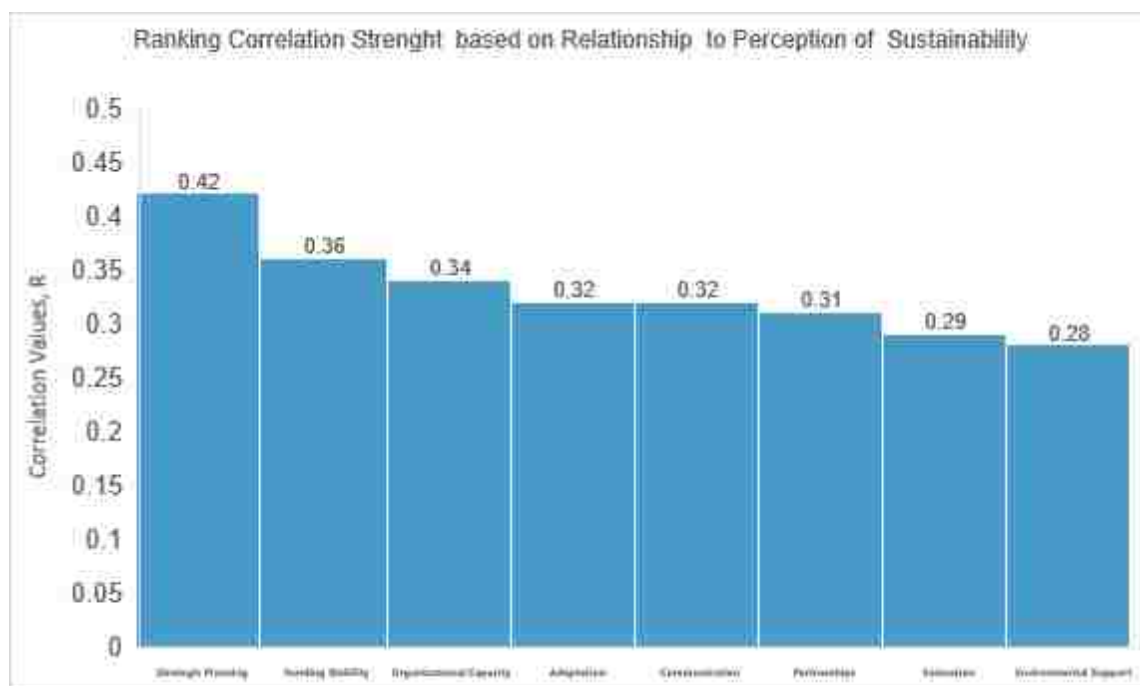


Figure 24: Cluster Bar Graph illustrating the ranking of the sustainably variables ranked on the strength of correlation. Strategic Planning ($r=.42$) being 1st and Environmental Support ($r=.29$) having the lowest positive relationship to HCPs perception of sustainability.

Moreover, Organizational Capacity and Program Adaptation had the strongest and most correlation range ($r = .85$). Thus, showing the interdependencies of these two variables: (1) HCPs perceive that as Adaptation of programs increases, so does Organization Capacity (2) the strength of the healthcare institution to carry out this task. The illustration in Figure 24 is the line of best fit. However, the question then remains how flexible healthcare organizations are in adapting programs to their organizations.

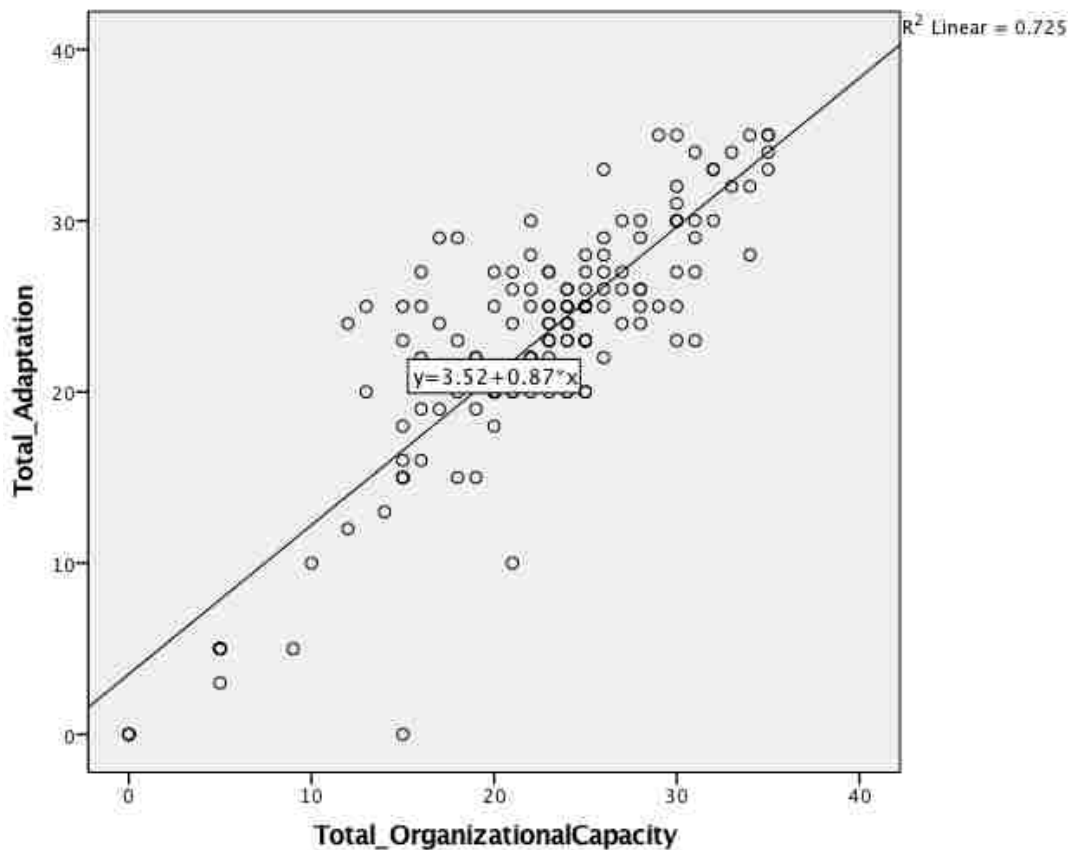


Figure 25: Pearson Correlation between Program Adaptation and Organizational Capacity shown as a scatterplot. The correlation of the two variables was highest based on the line of best fit ($R^2 = 0.72$) showing their interdependencies and mutual reinforcements ($r = 0.85$, $p < .001$).

Research Questions 9 - 56

For research questions 9 through 56: What is the difference between perception levels (4) on program implementation amongst HCPs as measured by the sustainability variables (8), a Multivariate Analysis of Variance (MANOVA) was performed. Recall that questions 9 through 56 generated the 4 perception groups leading to 6 group comparisons measured across the 8 sustainability factors totaling 48 ($6 * 8$) research questions and

hypotheses. All assumptions for MANOVA were met including (1) Random sampling and Independence of sample, (2) Equal group sizes & (3) Box's Test for equality. The Box's Test was used to determine that the population co-variance between each pair of dependent variables (8) were the same across groups. The equality of co-variance between the groups was significant at $p = 0.001$ at an alpha level of 0.01; which is less than 0.005.

However, MANOVA is known to be robust to violations of this assumption and; therefore, multivariate tests and a follow-up univariate tests (ANOVA) were performed.

Box's M	283.327
F	2.378
df1	108
df2	47784.662
Sig.	.000

Table XV

Box's test showing significance at $p = 0.001$ at an alpha level of 0.01

MANOVA Results

The multivariate measures, of Pillai's Trace and Wilk's Lambda were used for the analysis in this study. Using Pillai's Trace, there were significant differences between the 4 perception level groups (IV) with respect to the 8 dependent variables, [$\lambda = .29$, $F(24,453) = 2.08$, $p < .002$]. Using Wilks'

Lambda, $\lambda = .72$, $F(24,432) = 2.15$, $p < .001$] - Therefore, it is evident that there is significance and the population means on the DVs are not the same for each variable. Pillai Trace and Wilks' Lambda were used because these tests had the highest level of significance (Figure 10) and are considered the most robust to violations of MANOVA assumptions. Pillai's Trace is the sum of the proportion of explained variance on the discriminant functions. Wilks' Lambda is the product of the unexplained variance on each of the variates. This represents the ratio of error variance to total variance for each variate (Field, 2009).

Multivariate Tests ^a							
Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.948	337.205 ^b	8.000	149.000	.000	.948
	Wilks' Lambda	.052	337.205 ^b	8.000	149.000	.000	.948
	Hotelling's Trace	18.105	337.205 ^b	8.000	149.000	.000	.948
	Roy's Largest Root	18.105	337.205 ^b	8.000	149.000	.000	.948
Combined_PerceptionLevel	Pillai's Trace	.298	2.082	24.000	453.000	.002	.099
	Wilks' Lambda	.721	2.156	24.000	432.747	.001	.103
	Hotelling's Trace	.362	2.228	24.000	443.000	.001	.108
	Roy's Largest Root	.278	5.241 ^c	8.000	151.000	.000	.217

a. Design: Intercept + Combined_PerceptionLevel
b. Exact statistic
c. The statistic is an upper bound on F that yields a lower bound on the significance level.

Table XVI

Multivariate Test for Significance with the 4 groups (IV), the p value is less than .05 - Pillai's Trace ($p = .002$), Wilks' Lambda ($p = .001$).

Across most constructs, the Unsustainable groups had the lowest mean scores, followed by the Somewhat Sustainable groups, then the Moderately sustainable group, and finally with the Very Sustainable group having the highest scores. These results were in line with the order of

perception levels per study design: Un < Somewhat < Moderate < Very Sustainable. Where the < sign indicates group mean values are less than the other.

Exceptions with the perception group results was the Evaluation variable, where the Moderately Sustainable group had lower mean scores compared to the Somewhat Sustainable group. With the 8 variables, p-value was adjusted and significance was considered at 0.001 to be more conservative [$0.05 / 8 = 0.001$]. This interprets that with 99% confidence, the results are indicative of the population. This process for adjusting alpha is called a Bonferroni's correction as way to prevent false positive -Type I error (Portney and Watkins, 2000). MANOVA showed significance across most of the 8 dependent variables where $p = .0001$ (Table XI). Assumptions were met for 5 of 8 independent variables except for 3 - Environmental, Partnerships and Evaluation. Sustainability variables' order of means did not align in 3 of the 8 independent variables, revealing non-significance at $p=.001$ level.

Tests of Between-Subjects Effects							
Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model ^a	Total_Environment	651.514 ^a	3	217.171	5.226	.002	.381
	Total_Funding	1153.954 ^b	3	384.651	9.179	.000	.130
	Total_Partnerships	765.748 ^b	3	255.249	6.306	.001	.160
	Total_OrganizationCapacity	1018.504 ^c	3	339.501	7.723	.000	.129
	Total_Adaptation	976.417 ^a	3	325.472	8.094	.000	.119
	Total_Communication	941.471 ^c	3	313.824	6.321	.000	.108
	Total_StrategicPlanning	1830.304 ^d	3	610.101	11.671	.000	.185
	Total_ProgramEvaluation	541.153 ^b	3	180.384	4.465	.001	.103
Intercept	Total_Environment	84728.010	1	84728.010	2039.001	.000	.309
	Total_Funding	73815.058	1	73815.058	1781.538	.000	.219
	Total_Partnerships	75892.207	1	75892.207	1721.633	.000	.317
	Total_OrganizationCapacity	80262.593	1	80262.593	1826.388	.000	.321
	Total_Adaptation	84717.461	1	84717.461	1970.506	.000	.321
	Total_Communication	74069.297	1	74069.297	1681.947	.000	.305
	Total_StrategicPlanning	78180.760	1	78180.760	1819.38E	.000	.321
	Total_ProgramEvaluation	83478.068	1	83478.068	1987.372	.000	.311
Corrected Total	Total_Environment	651.514	3	217.171	5.226	.002	.381
	Total_Funding	1153.954	3	384.651	9.179	.000	.130
	Total_Partnerships	765.748	3	255.249	6.306	.001	.160
	Total_OrganizationCapacity	1018.504	3	339.501	7.723	.000	.129
	Total_Adaptation	976.417	3	325.472	8.094	.000	.119
	Total_Communication	941.471	3	313.824	6.321	.000	.108
	Total_StrategicPlanning	1830.304	3	610.101	11.671	.000	.185
	Total_ProgramEvaluation	541.153	3	180.384	4.465	.001	.103
Error	Total_Environment	6482.261	156	41.555			
	Total_Funding	8526.990	156	54.654			
	Total_Partnerships	8858.555	156	56.780			
	Total_OrganizationCapacity	8855.589	156	56.780			
	Total_Adaptation	7259.483	156	46.535			
	Total_Communication	7743.304	156	49.631			
	Total_StrategicPlanning	8703.471	156	55.791			
	Total_ProgramEvaluation	8203.947	156	52.586			

Table XVII
Multivariate Analysis of Variance (MANOVA) for all 8 Dependent Variables

Univariate ANOVA Follow Up Test

A follow-up Univariate Analysis of Variance Tests (ANOVA) was compared with .01 significance level. The range of the Standard Deviation (4.51 - 8.42) between groups and across the 8 factors, suggest a lack of homogeneity of variance as it is greater than +/-20%. Levene's test for

homogeneity of variance assumption across dependent variables were satisfied showing significance in the range of 0.01 - 0.50 (Table XII). ANOVA results confirms the MANOVA analysis that Evaluation, Environmental and Partnership variables showed no statistical significance. However, there is a difference between perception level groups of organizational sustainability and sustainability factors but for 3 of the dependent variables. Evaluation as a variable for sustainability also had no statistical significance among the perception groups - $F(3, 156) = 5.96$, $p = .001$. This implies HCPs did not see a difference in their perception of Evaluation metrics of healthcare programs and organizational sustainability. The order of the perception levels (Un < Some < Mod < Very) for Environmental Support $F(3, 156) = 5.22$, $p = .002$ and Partnerships $F(3, 156) = 5.80$, $p = .001$ had no statistical significance among the perception groups (Figure 25).

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Total_Environment	Between Groups	651.514	3	217.171	5.226	.002
	Within Groups	6482.261	156	41.553		
	Total	7133.775	159			
Total_Funding	Between Groups	1153.954	3	384.651	9.179	.000
	Within Groups	6536.990	156	41.904		
	Total	7690.944	159			
Total_Partnerships	Between Groups	765.748	3	255.249	5.806	.001
	Within Groups	6858.596	156	43.965		
	Total	7624.344	159			
Total_OrganizationalCapacity	Between Groups	1018.504	3	339.501	7.725	.000
	Within Groups	6855.589	156	43.946		
	Total	7874.094	159			
Total_Adaptation	Between Groups	976.417	3	325.472	6.994	.000
	Within Groups	7259.483	156	46.535		
	Total	8235.900	159			
Total_Communication	Between Groups	941.471	3	313.824	6.321	.000
	Within Groups	7745.304	156	49.649		
	Total	8686.775	159			
Total_StrategicPlanning	Between Groups	1530.304	3	510.101	11.871	.000
	Within Groups	6703.471	156	42.971		
	Total	8233.775	159			
Total_ProgEvaluation	Between Groups	941.153	3	313.718	5.965	.001
	Within Groups	8203.947	156	52.589		
	Total	9145.100	159			

Table XVIII

Follow-Up Univariate Tests (ANOVA) for the 8 Sustainability Variables

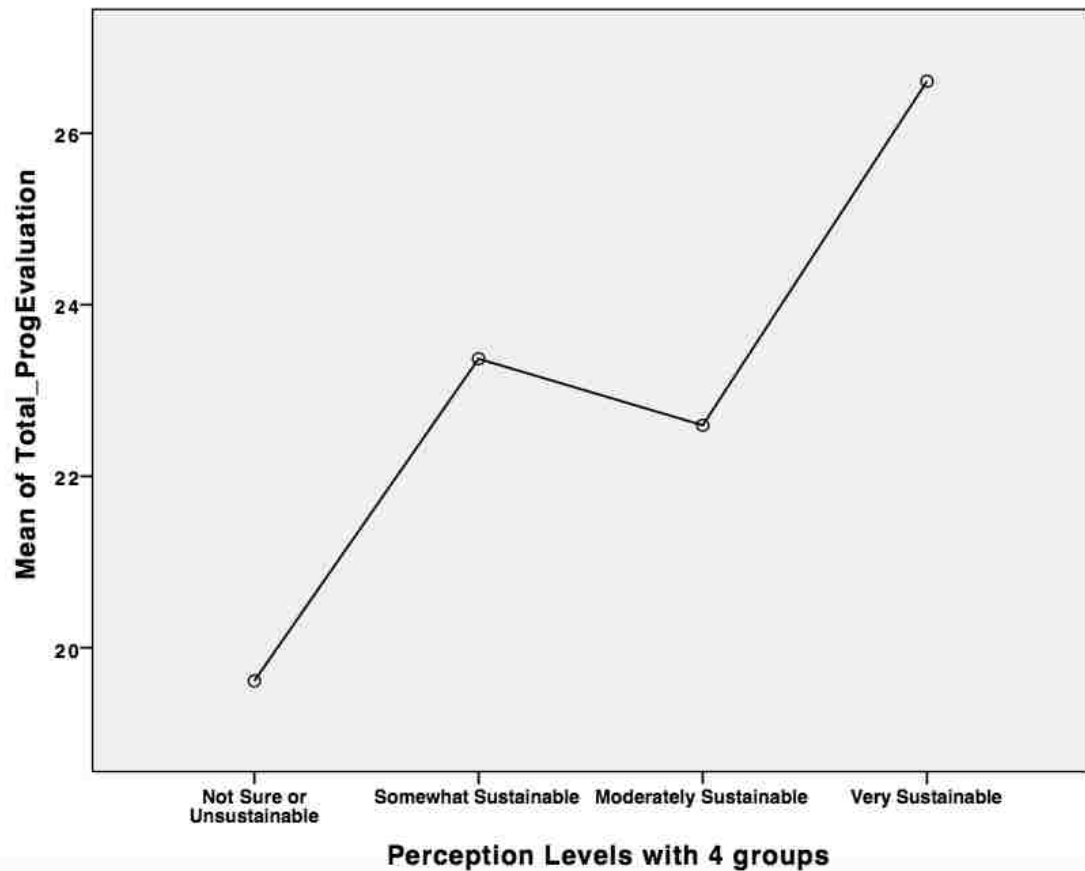


Figure 26. Sample Chart of Evaluation as a sustainability variable with no statistical significance among the perception groups - $F(3, 156) = 5.96$ $p = .001$.

Post Hoc Analysis

Effect Size. For the Post Hoc analysis, we exceeded the a-priori by $N=28$. Using Wilks' Lambda value of .721, an effect size of .10 that was calculated from the multivariate tests. Alpha set at .01, with 4 groups and 8 dependent variables. The calculation is depicted as follows:

$$n^2 = 1 - \lambda^{(1/s)}$$

$$1 - .721^{(1/4-1)}$$

$$1 - (.721^{.333})$$

$$1 - 0.896$$

$$n = .103$$

An effect size from the multivariate test with alpha set at 0.103. S in equation equals the numbers of groups minus 1. The index of variance $1 - \lambda$ explained is the amount of variance accounted for by the independent variable.

The post-hoc G*Power Analysis. A power of .99 was calculated for the post hoc g-power analysis ($1 - \beta$ err prob) = 0.9995 (Figure 26). Alpha was set at .05, effect size from the calculated .10, using 4 groups and 8 dependent variables. This output reveals the study was sufficiently powered for the analysis due to high number. The post-hoc analyses revealed the study was sufficiently powered (Ellis, 2010).

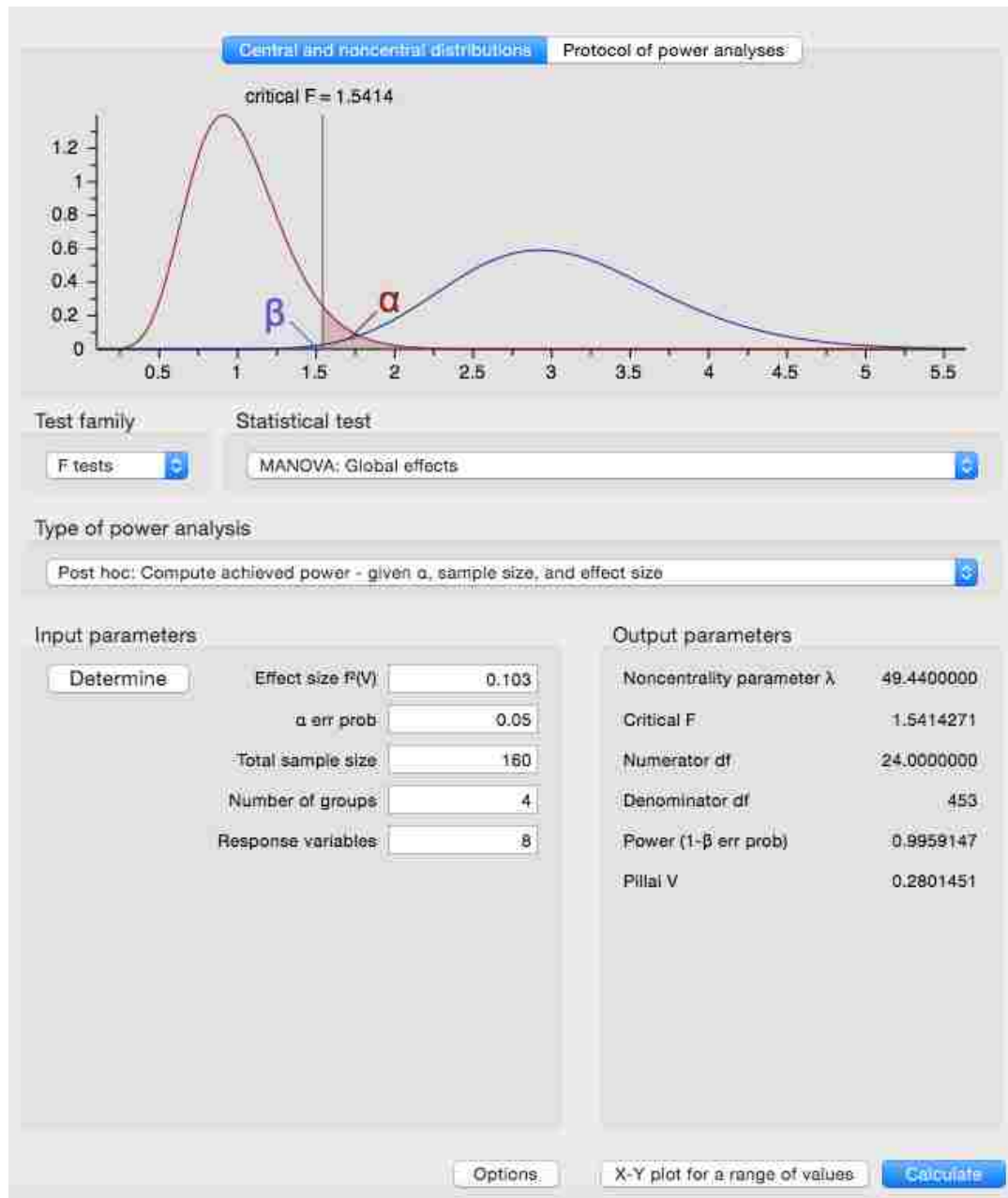


Figure 27. The post-hoc G*Power Analysis - Using an effect size of .10, alpha set at .05, with 4 groups and 8 dependent variables, the post-hoc G*Power Analysis for F Test MANOVA Global Effects resulted in a power of 0.99.

Summary of Findings

To summarize the analysis, the Sustainability Assessment Tool for Healthcare Organizations (SATHO), demonstrated excellent reliability ($\alpha = .97$), George and Mallery (2011). All sustainability variables were in small to moderate rate correlation (Fields, 2009). The differences of the means between the 4 groups showed the Very Sustainable (VS) group reporting the highest means across the dependent variables than the other groups (Table XIII). Inconsistency was within the 2 middle groups with the order reversed for "Evaluation". MANOVA significance ($p=0.001$), suggest the difference between the group is significant for most sustainability variables except for Environmental, Partnerships and Evaluation. ANOVA Follow Up test confirmed this significance at $p=0.0001$.

	Unsustainable	Somewhat Sustainable	Moderately Sustainable	Very Sustainable
Environmental	M=19.95; SD=0.97	M=23.54; SD=0.95	M=23.91; SD=1.06	M=25.44; SD=1.12
Funding	M=17.6; SD=0.97	M=21.96; SD=0.95	M=21.81; SD=0.1.06	M=25.30; SD=1.13
Partnership	M=18.54; SD=1.00	M=21.74; SD=0.98	M=22.92; SD=1.09	M=24.58; SD=1.15
Organization Capacity	M=18.54; SD=0.99	M=22.54; SD=0.98	M=23.32; SD=1.09	M=25.82; SD=1.15
Adaptation	M=19.36; SD=1.03	M=23.30; SD=1.01	M=23.81; SD=1.12	M=26.36; SD=1.19
Communication	M=18.66; SD=1.06	M=20.50; SD=1.04	M=22.19; SD=1.16	M=25.49; SD=1.23
Strategic Planning	M=17.79; SD=0.98	M=21.67; SD=0.97	M=23.13; SD=1.08	M=26.61 SD=1.14
Evaluation	M=19.61; SD=1.09	M=23.37; SD=1.07	M=22.59; SD=1.19	M=26.61; SD=1.26

Table XIX

Means and Standard Deviations of the 4 Perception Groups (DV) across the 8 Sustainability factors (IV)



For *Environmental*, the VS group had a mean of 25.42 and a standard deviation of 1.12. For Funding, VS had a mean of 25.30 and a standard deviation of 1.13. For *Partnerships*, VS had a mean of 24.58 and a standard deviation of 1.15. For *Organizational Capacity*, VS had a mean of 25.82 and a standard deviation of 1.15. For Adaptation, VS had a mean of 26.36 and a standard deviation of 1.19. For Communication, VS had a mean of 25.49 and a standard deviation of 1.23. For Strategic Planning, VS had a mean of 26.61 and a standard deviation of 1.14. For *Communication*, VS had a mean of 26.61 and a standard deviation of 1.26.






























Research Questions 9-56 and Hypotheses

For the results of the hypotheses on *DIFFERENCES* among the independent groups and the sustainability factors, Table XIV was developed. To give context to this table, the group comparison are the column headers 4 groups = 6 comparisons. The Sustainability form the rows as each group comparison is done in 8 distinct isolation — leading to the 48 hypotheses as presented earlier. As mentioned previously, the framework for difference comparison is structured in this order: Unsustainable group is (less than) < Somewhat sustainable group, somewhat sustainable group is less than Moderate group, and the Moderate group is less than the Very Sustainable group. With each of the sustainability variables, most of the group have statistical significant differences, i.e., they follow the pattern as indicated —

[Un < Somewhat < Moderate < Very. So PI Fails to REJECT the alternative hypotheses for all those sustainability factors but for Environmental Support, Evaluation and Partnerships we REJECT. A detailed review of the qualitative response were analyzed for themes and trends in the discussion section. These themes helped provide context into the trends of the hypotheses.

Table XX

Table Review of Hypotheses - Reject or Failure to Reject for Hypotheses 9 through 56 with the  mark indicating Reject and the (checkmark)  indicating Failure to Reject Hypotheses.

		A	B	C	D	E	F
		Un vs. Some	Un vs. Mod	Un vs. Very	Some vs. Mod	Some vs. Very	Mod vs. Very
1	Environmental	H9 = 	H17 = 	H25 = 	H33 = 	H41 = 	H49 = 
2	Funding	H10 = 	H18 = 	H26 = 	H34 = 	H42 = 	H50 = 
3	Evaluation	H11 = 	H19 = 	H27 = 	H35 = 	H43 = 	H51 = 
4	Adaptation	H12 = 	H20 = 	H28 = 	H36 = 	H44 = 	H52 = 
5	Communication	H13 = 	H21 = 	H29 = 	H37 = 	H45 = 	H53 = 
6	Strategic Planning	H14 = 	H22 = 	H30 = 	H38 = 	H46 = 	H54 = 
7	Partnerships	H15 = 	H23 = 	H31 = 	H39 = 	H47 = 	H55 = 
8	Organizational Capacity	H16 = 	H24 = 	H32 = 	H40 = 	H48 = 	H56 = 

Chapter V

DISCUSSION

General Discussion of Study Findings

The purpose of this study was to (1) understand the factors affecting healthcare organizational sustainability and (2) determine if the different perception of sustainability affects how HCPs support the implementation of programs in their organizations. Through the literature review, it was asserted that more than just the isolation of the macro variables of Environmental, Economic and Social are needed for sustainability but a comprehensive set of practical tactics - Environmental Support, Funding, Evaluation, Adaptation, Communication, Strategic Planning, Organization Capacity, Partnerships.

The following section will elaborate on the results of the statistical findings of this study. The various sections in the chapter include a review of the conceptual framework, in context of the correlation results. As discussed, the tool adopted for this study showed excellent reliability ($\alpha = 0.97$) and had been tested broadly among HCPs in public health programs. The correlation results from this study showed positive relationships between the sustainability factors and the MANOVA revealed inconsistencies in the group differences. A broader discussion of the open-ended responses highlights additional themes and trends on this research topic of organizational sustainability. The open qualitative responses were evaluated in 4 ways: (1)

To link existing literature on a prevalent idea shared by many HCPs in this study around the lack of a shared vision among all HCPs in building a sustainable organization, (2) Discuss factors of sustainability that are shared with regards to the interdependencies and mutual reinforcements. (3) Qualitative responses are discussed in the context of roles and hierarchy within the healthcare organization, i.e., HCP vs. Administrator and a mid-level staff vs. senior level HCP, having opposing views on what drives organizational sustainability. Fourth and lastly, a comparison of qualitative responses based on the perception vs. the reality of organizational sustainability is discussed with insights into leadership styles, organizational culture and its impact on building sustainable healthcare organizations.

Conceptual Framework Revisited

Recall, that the premise behind this research anchors on the sustainability of healthcare organizations. Based on the results from this study, Figure 27 below shows a revised version of the conceptual framework from this study.

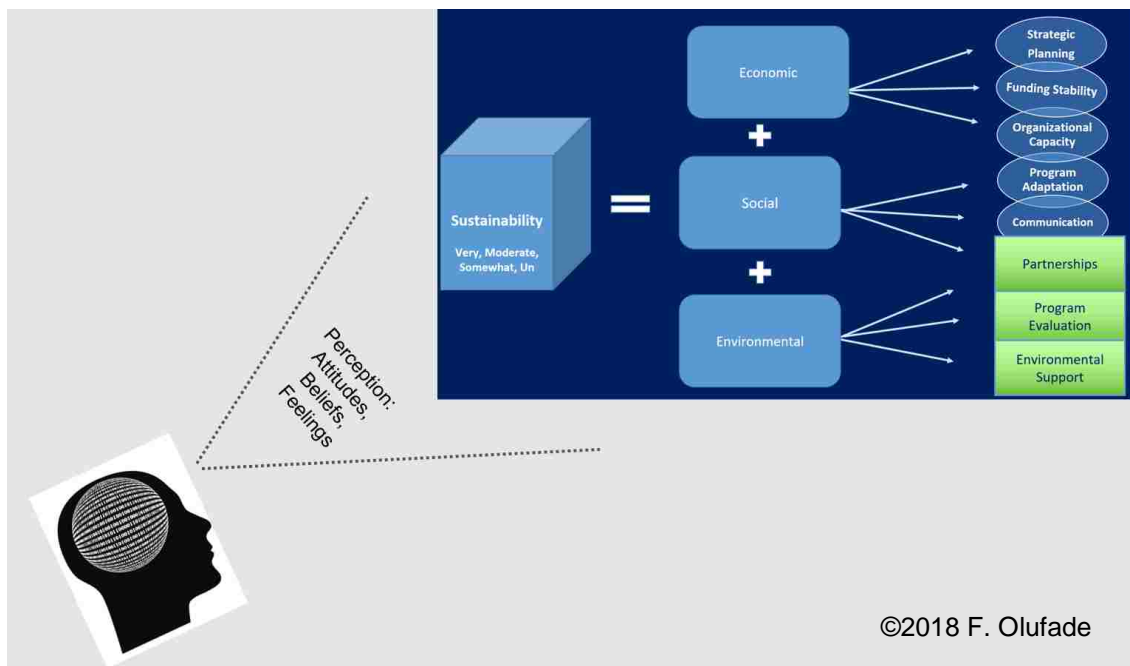


Figure 28. Revised Principal Investigator (PI) developed conceptual framework post statistical analyses to highlight ranking and inter-dependencies of the sustainability variables.

The observation from the correlation results is that all variables had positive low to moderate relationships to Sustainability. This study enabled us to understand and determine the order of awareness by HCPs of the variables in relationship to Sustainability. Based on the strength of the correlation the factors are now arranged in rank order with the strategic planning perceived to be the most related factor to sustainability and environmental support being the lowest. The overlapping variables suggest these variables are mutual reinforcements of each other. The 3 lower variables are highlighted in green as having the lowest correlation strength

but did not have a non-significant difference in how HCP perceive their impact of organizational sustainability. Partnerships, Evaluation, and Environmental support can serve as baseline opportunity areas where healthcare organizations can cultivate and help make their HCPs more aware and see the value in these factors.

Although the practical factors contributing to sustainability appears essential, there were subtle inconsistencies with the perception levels. Moreover, the perception of healthcare programs aligned with the theory of representational content rather than objects as HCPs were able to express their options on the sustainability of their organization based on their experience. Furthermore, this research supports a disconnect in the perception - for 3 of the 8 variables: Environmental, Partnerships and Evaluation - vs. the reality of how healthcare organizations implement processes and programs.

The open-ended questions from the survey guiding the next section of discussion were as follows:

1. *What is your perception of your organizations' adoption of programs under the ACA and its implementation process?*

AND

2. *How can your organization improve its prospect for long-term sustainability?*

Open-Ended Responses

The qualitative response served a few purposes. The first was reinforcing the factors mentioned in the literature review. As highlighted in the table below, direct quotes from the survey with inferences to the sustainability factors highlighted and underlined. The quotes can be negative or positive and from different HCPs who help contribute to building the organization. The second is a comparison of views along the same topic. Diverging views can be a function of unique organizational characteristics but offers context to the realities of this topic.

	Representative Comments
Environmental	Vice President - "There is a vision for <u>outreach to the community</u> and transitioning care to the patient and home, however no clear plan that I am aware of"
Funding	Staff Psychologist - "By communicating more effectively with the public.... It could be improved by bringing forth more <u>financial resources</u> to make sure the program remains stable."
Partnership	Manager (#1) - "Diversification is the key to success. Having a wide array of staff and positions to administer services appropriately. By obtaining ongoing business and <u>building relationships</u>
Organization Capacity	Associate VP - "Having a <u>particular department</u> responsible for keeping up to date on the programs and all of its components. ..."
Adaptation	Sr. Director - "The Program directly affects my hospital's ability to sustain itself. We have <u>adapted our care plans</u> to reflect the requirements set for us."
Communication	Senior VP - "Dysfunctional, our organization is economically sound and not aware of the reality of the program and almost in a state of denial. Accept the reality and <u>communicate</u> with the community and build a shared vision."
Strategic Planning	Administrator - "We intend to work through the difficulties. Better <u>strategic planning</u> , improved communication to the public and between senior leadership and the rest of the organization."
Evaluation	Manager (#4) - "Developing (the program) <u>continuously, reviews, discussions, research</u> and implementation"

Table XXI:

Representative Comments from Open End Questions with Sustainability Factors highlighted. A full list of responses from the open-ended questions available in Appendix G

Sharing a common vision and objective for program implementation fosters employee engagement and creates a positive perception for care delivery. In addition to reinforcing the sustainability factors, these responses highlight the lack of integration of ideas behind the topic studied in this

research. The gap here is to connect the ideas into an outcome-oriented solution for HCPs and administrators to adopt. For true compliance and adoption of healthcare programs, a continued effort is required to inform and educate on the rationale behind set programs. This, in turn, will develop the 8 factors into building a sustainable organization. Healthcare delivery is an intricately complex system, but people (employees) make the system adaptive through their behaviors and shared values (Stemberg et al. 2012). Based on comments from Table XII, negative attitudes and exclusion of groups of employees will dissuade more HCPs from contributing to organization success.

Literature Link to Qualitative Response – Shared Vision

Most organizations including those in healthcare have a mission statement based on a vision guiding how they approach delivering on the organizational values vital to them. The “how” – approach to achieving these goals is where most organizations falter. Mission statements can be empowering making managers and leaders share a common goal (Gulati et al. 2016). All plans activities and decisions should essentially be directed toward this goal. Some of the qualitative responses from this study support what literature states on perception as a reflection of attitudes, feelings, and behaviors. Examples of the below statement from a staff primary care physician:

"The program by design will fail.., "The Keystone to Socialism is through government control of the people's healthcare." Unless in the very least it is repealed and for the ultimate purpose to completely replace it, there will be no long-term success, and it will lead directly into a single payer platform" – PCP

A few takeaways from this quote is first that the assessment of how new healthcare program impacts their organization was very subjective. As an employee but one with influence, it is prudent of middle managers to assess issues with openness and position a balance between what is working and not, is essential. Focusing on incremental gains rather than drastic changes can positively affect peers and subordinates. Historically, HCPs and particularly doctors have been trained as sole decision makers with complete autonomy in patient care (Hannah et al. 2015). Integrating doctors and all HCPs into a team-driven approach to care delivery will make organizations more effective. Secondly, the negative feedback can affect patient care, cost overall performance of the healthcare system. It remains crucial that HCPs connect their observation of the implementation process to their overall impression of the program and their organization. As Administrators and HCPs develop programs, an objective opinion will be required for success. Patients who receive care can thoroughly benefit from an unbiased view of their healthcare practitioner. HCPs can also proactively provide feedback to administrators for more positive engagement (Gulati et al. 2016).

As with this example, this PCP challenges the ideas behind a trend in the US healthcare system as socialism. Repealing and scrapping a program entirely implies starting from zero (0%) - a cynical perspective that can translate into how care is administered. Whereas, through objective assessment - perhaps building on what is good is a better solution. As complex as US healthcare is, a complete change of direction might not always be ideal. A positive attitude will aid the implementation process of any program. Aligning employee attitudes to the organizational vision can foster stronger organizational performance. A team concept approach by HCPs can facilitate better care delivery and build leadership skills (Hannah et al. 2015).

Qualitative Response on Interdependencies of Sustainability Factors

The factors for sustainability are not just tactics but more critical activities that can be measured. This paradigm leads to the literature of implementation science in healthcare. According to Ramirez et al. (2013), the gap in healthcare innovation implementation is due to lack of integration of change management strategies needed to implant a culture of sustainability. The below quotes shows examples of how HCPs view sustainability as a multi-pronged approach. The first quote is by a staff psychologist highlighting the need for communication, funding, and partnerships in the same breathe.

“By communicating more effectively with the public. My institution's relationship relies on these programs to a certain extent because the program

outlines the relationship within its existence if it applies. It could be improved by bringing forth more financial resources to make sure the program remains stable.” – Psychologist

*“Dysfunctional, our organization is economically sound and not aware of the reality of the changes in healthcare and almost in a state of denial. Accept the reality and communicate with the community and build a shared vision” -
Senior VP*

The second quote is from a senior administrator calling for the improvement of two variables or build a sustainable organization. More importantly, this administrator states the organization being in a state of denial to change. Communication is a key variable highlighted in the quote. This administrator fails to connect that communication as a one-directional process can be ineffective. Rather than increasing communication, productive dialogue between all stakeholders in an implementation process is what needs to be considered. This closed loop form of communication should include all staff levels within the organization as well as patients and care-givers all engaging in an exchange of ideas about how the implementation of a healthcare programs affects them and how it can be improved. By doing this, communication is not done in isolation and more effective. Open dialogues as a form of effective communication facilitate the achievement of

other factors of sustainability including partnerships, evaluation, and strategic planning. This holistic framework for organizational sustainability can support healthcare managers to implement strategies for multidisciplinary teams to respond to change, fine-tune operations and successfully manage the quality of care. The below examples show how respondents think of sustainability variables in isolation. The quotes are from senior level managers in healthcare (Ramirez et al., 2013).

Literature Link to Qualitative Response on Hierarchy - HCP vs.

Administrator

Based on the next set of qualitative responses, HCPs and administrators readily admit to issues in policy implementation. However, they have opposing views on the approach to resolving the challenges.

"We do not interact with management. We just follow" - Specialist Physician.

"We intend to work through the difficulties and work to reach resolutions as needed. Better strategic planning, improved communication to the public and between senior leadership and the rest of the organization" – Administrator

As the specialist physician feels management or administrator are sole decision makers they should be held responsible for the sustainability of the

organization. While employees, in particular, individual contributors like him comply with the policy changes. Again, the role of leaders, manager, and influencers within organizations cannot be understated. As top leaders develop the overall strategy of organizations, managers diffuse and synthesize information and mediate with day-to-day activities (Birken et al., 2012). Leadership styles & effective engagement of employees can affect perception within an organization. The responses from a staff physician and an administrator reveal first that there is a self-admission from both that there are issues with the implementation process in their organizations. Secondly, the statement of the staff physician shows a sense of isolation from what makes for a successful team dynamic. The administrator showed a more positive attitude outlining steps to resolve the issue. In leadership, effective engagement can affect employee perception positively. Employee's perception of their organization is shaped both by leaders and the managers they interact with, so programs should be adequately designed and delivered for sustainability (McAlearney, 2006).

Organizational Hierarchy. It is imperative to point out the differences between a mid-level and a senior level HCP in how they view program implementation in their organization. According to Birken et al. (2012), the gap in healthcare innovation implementation is due to disconnect in activities middle managers should engage in and what they do in practice. The below

quotes highlights the assumed role of 3 different individuals in a healthcare system.

"Currently only supporting the program for the financial return. Devote greater resources to allow the program to grow" - Administrator.

"To be honest, we have a person who takes this actions for the clinic with the boss. So I do not know how program and policy actions are with us" - Medical Assistant

"These programs directly affects my hospital's ability to sustain itself. We have adapted our care plans to reflect the requirements set for us." - Sr. Director

This vertical perspective from multiple employees on the same issue is valuable in resolving critical issues. Based on the above qualitative excerpt from the Medical Assistant (mid-level HCP) and the others roles in management, the relationship between a mid-level and a senior level HCP seems purely transactional. This medical assistant, depending on the health are setting must have developed managerial competencies to reflect on the adequately on his organizational practices. All HCPs comply with new policies to meet requirements without a full understanding of the rationale behind.

These transactional processes that have dominated internally and externally among healthcare organizations require changes to successfully evolve into new care delivery systems (Charms, 2010). Organizational sustainability is a complex phenomenon that requires more than one group of employees.

Adopting a transformational leadership style with new policies can lead to successful compliance and execution. Transformational leadership can lead to sustainable growth. For healthcare delivery to be efficient and safe, all HCPs regardless of the leadership structure needs to be aligned. By adopting a transformational culture in healthcare, especially with new policy implementation, successful compliance and execution of programs can be better achieved (Wheatley, 2010).

Perception vs. the Reality of Organizational Sustainability

Healthcare delivery is performed within an integrated system with interdependencies that require stronger organizational mechanism and processes for effectiveness. According to the below quote from a senior administrator organizational plans sometimes only reside in manuals and conference rooms where meetings are held.

“There is a vision for outreach to the community and transitioning care to the patient and home, however no clear plan that I am aware of” - Vice President.

This study revealed two of essential factors in building a sustainable organization as strategic planning and funding. Given the complex web of financial pressures on HCPs and healthcare institutions, stable funding should be a strategic process that addresses short and long-term needs healthcare institutions. Funding fluctuations can further put pressure on programs and make it difficult to provide consistent quality services, but the ability of budgets to adapt to economic cycles is critical. Programs that rely on a single funding source, rather than multiple sources, are more vulnerable when budget cuts occur. Engaging the community on the importance of programs can highlight the value of programs and can lead to additional funding sources in the form of philanthropy. Additionally, strategic planning is the glue that holds all sustainability efforts together. Without a strategic direction and long-term goals, programs only react to day-to-day demands. Strategic planning combines all elements of the sustainability domains into an outcome-oriented plan. Planning also ensures that the program is well aligned with the broader external and organizational environment.

Moreover, to successfully execute a strategic plan requires the involvement of inter-disciplinary and employees at all levels. The example of the quote below is from a manager at a community hospital:

"The institution is aware of future changes and is implementing strategies now to address them. Perhaps find a way to include more healthcare providers in

decision making as it pertains to the efficient delivery of healthcare & building relationships." – Manager

Recall that Evaluation is one of the eight factors of sustainability with a positive correlation but with inconsistent perception group comparison. This shows that it is not apparent to HCPs in how metrics and evaluation processes contribute to building a sustainable organization. The charge of HCPs is delivering care with less focus on its efficiency. The premise that most evaluation metrics do not align with the realities of healthcare practice only supports the claim by the Manager above. The inclusion of practitioners, managers, and administrators in the development of the evaluation metrics and the topic of sustainability as whole will lead to better engagement, empowering HCPs to motivate and more accountable. The inclusion of employees with managerial competencies in problem-solving and decision-making induces commitment and job satisfaction, all attributes of the social constructs of sustainability. A high involvement in organizational design in healthcare will foster employee motivation and empower engagement in tasks and projects.

Building a high involvement working culture as a form of an organizational design should include problem-solving and information sharing. This management style requires a balance in the sharing of influences among employees who are otherwise unequal for problem-solving, information

processing and decision-making (Locke and Schweiger, 1979; Wagner, 1994). Considerable research has shown that this form of participative management positively affects job satisfaction, empowerment, and productivity through communication, adaptation, and partnerships (Harmon et al. 2003). By strengthening the relationship between what sustainability is and its perception in healthcare organizations among all HCPs, participative management will be realized. HCPs and patients can both benefit from an enhanced organizational performance in healthcare.

Practical Implications

Three core practical implications can be surmised from the study findings. The first being that healthcare organization sustainability matters and the implementation of programs require a more robust process. The robust process should include activities that can help maintain a program, and it benefits over time. Secondly, these findings revealed that some HCPs do not associate the implementation of new healthcare programs as having a strong relationship to organizational sustainability. Therefore, engaging multi-disciplinary teams will increase motivation, productivity and build a shared vision. The perception of either programs or policy change impacts its probability of success and contributes to the overall sustainability of the organization. If programs are rolled out and implemented with the eight factors in mind, HCPs will perceive it as more sustainable and support its execution. Lastly, in this research study, HCPs reported that as program

adaptation increased, organizational capacity also increased favorably. As the US healthcare continues to evolve, the benefit for institutions is a framework to adapt and keep healthcare professionals engaged and organizations sustainable. The analysis from this study should serve to close the knowledge gap in the need for non-clinical metrics being integrated into the standard practice of care delivery and administration.

Study Limitations

The limitations of this study are as follows:

Self-Reported Data. Although this study measured perception, all the data collected were from the view of participants and other confounding variables about their professions might have had an effect. The respondent's feelings and reactions to the survey questions might have been subdued or exaggerated. This limitation is synonymous with all survey collected studies.

Sampling Concerns due to Gender Discrepancy. This study was generally opened to all HCPs, but recruitment came from professional groups with female totaling 77% of overall respondents. Males made up only 23% of the sample which is below a representative population. Future research with a balance in the gender of respondent might be beneficial to the research topic on organizational sustainability.

Cross-sectional data. The data collected was at a point in time and does not reflect the evolution of a new healthcare policy similar to the Affordable Care Act. HCPs might become more tolerant on how policy affects

their organizations. This evaluation could require a longitudinal study where HCPs were followed over time to adequately assess perception. Perhaps the HCPs attitudes, relative to the factors of organizational sustainability will evolve with healthcare policy.

Voluntary Participation or non-response bias. Although healthcare programs like those under the ACA affect all HCP, respondents who chose to complete the survey might be only those interested in the topic that perhaps limits a diverse view on the topic of organizational sustainability.

Respondent Bias. Given that healthcare and the Affordable Care Act are such controversial topics, respondents subjectivity might have been hard to suppress since other qualifiers as ethnicity, percent of administrative work or political affiliation were not exclusions for the study. Participants might have spent more time on the survey questions thereby affecting the accuracy of the responses provided about their organization.

Generalizability. Results from this study are not generalizable as it reflects the views of the participants in this study from the United States. Results are not generalizable to the professional organizations and associations whose members completed the study as it only contains views from a portion of its members. More research is also needed to generalize the results of this study to healthcare professionals as a whole.

Chapter VI

CONCLUSION

Recommendation for Future Research

To expand on the topic of organizational sustainability in healthcare, further research is required. Future research can focus on if healthcare professional perception changes with time as health policy evolves. As an exploratory study, the definition on the perception of sustainability can be further evaluated as a comparative study requiring qualifying questions such as the size of organization (mid vs. large), percent of HCP administrative work, type of organization to understanding more confounding variables behind HCP perception. As stated earlier, perceptions are formed by individual feelings, belief and actions, the impact of confounding variables can be germane to perceptual experience. Moreover, demography predictors for perception became important as established by the qualitative responses, factors such as ethnicity and political affiliations can also be investigated.

Another suggestion might be to utilize discrete groups comparisons in the understanding perception of organizational sustainability. This implies studies focusing on comparing HCPs vs. Non-HCPs, Male vs. Female, Management vs. Non-Management. This will be important if a balanced group from the above can be achieved for comparison. Although this study had more female respondents than males, analyzing the difference in how gender affects the way HCPs practice and the perception of their organizations could

prove valuable. Additionally, a longitudinal study would be a novel study on thought leaders and administrators in healthcare. Regardless of the healthcare legislation that dominates the news headlines, the implementation in healthcare organizations still matters. The US healthcare industry has grown and changed dramatically over the past 25 years. Besides being the nation's largest industry, employing over 13 million people, it is also the most complex with its numerous interrelated and interdependent segments. Today, all healthcare stakeholders, including patients, healthcare professionals, and payers, are facing significant change. It is prudent of healthcare organizations to have processes in place to be agile and adaptable. While it is hard to predict how health care will be redefined, healthcare organizations should remain as dedicated as ever to providing patients with quality care in strength and stability.

Dissertation Significance and Conclusion Statements

Healthcare organizations by definition have clinical services as their primary value proposition. People go to medical offices and hospitals because they perceive it as a place they can secure clinical guidance on any of the many types of ailments. However, as much as hospitals are associated with medicine and care delivery, it is also a business. It is a business with employees, customers, and processes to achieve its goals and objectives. With this study, healthcare organizations can develop a practical and

comprehensive approach to implementing programs efficiently without compromising the quality of care.

All employee levels and multi-disciplinary teams within a healthcare organization can help contribute to the implementation of programs and initiatives. This in turn builds a high-involved working organization with engaged and motivated employees. The perception of the program invariably affects its probability of success and contributes to the sustainability of the organization. With a holistic framework for sustainability, healthcare managers can implement strategies to respond to the constant policy changes, fine-tune operations and successfully manage the quality of care.

Further, aligning the perception to the reality of implementation processes requires diligence and structure. Organizations should remain committed to knowing every action or inaction affects their probability of being successful and ultimately sustainable. The parallel here is with a growing plant, symbolic of a program being implemented in a healthcare institution. Conventional thought says a plant requires oxygen, water, and sunlight to grow and become a tree (sustainable). What is usually left out of the discussion is all other mundane, but essential steps to support the plant's growth to becoming a tree - eliminating weeds, grafting, pruning, irrigation systems, cutting branches, fence off from wild animals and perhaps protection from heavy snow. This research shows we need to do all these for healthcare. The least discussed practical actions of ensuring communication,

Environmental Support, Funding Stability, Evaluation, Adaptation, Strategic Planning, Organization Capacity, and Partnerships are required for the sustainability of healthcare organizations.

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APPENDIX A

PSAT Approval Letter from the University of
Washington, St. Louis

 Washington University in St. Louis
GEORGE WARREN BROWN SCHOOL OF SOCIAL WORK

Center for Public Health Systems Science

August 5, 2015

Funso Olufade


Re: Program Sustainability Assessment Tool

Dear Funso Olufade:

Thank you for your interest in the Program Sustainability Assessment Tool.

Regarding permission to use the tool: as a general rule, we share the tool freely under a "Creative Commons License" which allows anyone to use/adapt the tool as long as you 1.) Cite Center for Public Health Systems Science, Washington University in St. Louis as the creator of the tool; 2.) Share any adaptation of the tool you create under the same Creative Commons License; 3.) Name any adaptations of the tool that you create something other than "Program Sustainability Assessment Tool" to avoid confusion in the literature and elsewhere (but still cite us as the original creator of the tool from which yours was adapted); and 4.) Do not make a profit off the tool.

We also ask that you notify us of any papers/posters, etc. you publish/present using the tool as we like to keep a database of the various ways the tool has been used.

Do not hesitate to reach out with questions.

Sincerely,



Sarah Moreland-Russell, Ph.D., MPH
Assistant Research Professor, Brown School of Social Work
Washington University in St. Louis
700 Rosedale Ave. Box 1009 | St. Louis, MO 63112

APPENDIX B

Approval Letter from Seton Hall University

Institutional Review Board (IRB)



OFFICE OF INSTITUTIONAL
REVIEW BOARD
SETON HALL UNIVERSITY

July 29, 2016

Funso Olufade
[REDACTED]

Dear Mr. Olufade,

The Seton Hall University Institutional Review Board has reviewed the information you have submitted addressing the concerns for your proposal entitled "An Assessment of Healthcare Sustainability among Hospitals post Affordable Care Act (ACA)." Your research protocol is hereby accepted as revised and is categorized as exempt.

Please note that, where applicable, subjects must sign and must be given a copy of the Seton Hall University current stamped Letter of Solicitation or Consent Form before the subjects' participation. All data, as well as the investigator's copies of the signed Consent Form, must be retained by the principal investigator for a period of at least three years following the termination of the project.

Should you wish to make changes to the IRB approved procedures, the following materials must be submitted for IRB review and be approved by the IRB prior to being instituted:

- Description of proposed revisions;
- *If applicable*, any new or revised materials, such as recruitment fliers, letters to subjects, or consent documents; and
- *If applicable*, updated letters of approval from cooperating institutions and IRBs.

At the present time, there is no need for further action on your part with the IRB.

In harmony with federal regulations, none of the investigators or research staff involved in the study took part in the final decision.

Sincerely,

Mary F. Ruzicka, Ph.D.

Mary F. Ruzicka, Ph.D.
Professor
Director, Institutional Review Board

cc: Dr. Deborah DeLuca

APPENDIX C

List of Social Media Professional Groups

1. American Organization of Nurse Executives
2. American Nurses Association
3. American Association for Physician Leadership
4. American Association of Healthcare Administrative Management
5. Healthcare Financial Management Association (HFMA)
6. New Jersey Hospital Association (NJHA)
7. American College of Healthcare Executives (ACHE)
 - *All 50 state chapters*
8. AHRQ - Agency for Healthcare Research and Quality
9. Healthcare Leaders of New York
10. Healthcare Management Association (HMA)
11. American College of Health Care Administrators (ACHCA)
12. Becker's Hospital Review
13. Medical Group Management Association (MGMA)
14. National Association of Healthcare Access Management (NAHAM)
15. Health Care Administrators Association (HCAA)
16. American Case Management Association: ACMA
17. National Association of Hispanic Nurses – *all state chapters*
18. Association of Hispanic Healthcare Executives
19. Northern New Jersey Black Nurses Association

APPENDIX D

Letter of Solicitation Letter to Survey Participants



Sustainability Assessment for Healthcare Institutions

Solicitation Letter



Dear Healthcare Professional,

You have been invited to participate in this survey study. Previous research has suggested some factors more than others contribute to the success of healthcare sustainability. The completeness of these factors, internally and externally are however needed for long term success. The purpose of this study is to determine the relationship between these factors and healthcare sustainability post the 2010 Affordable Care Act (ACA). For this study, Sustainability is defined as the ability to maintain a program and its benefits over time. Another purpose is also to find whether ACA programs are adopted for incentives or to avoid penalties. Invariably, the study aims to determine if ACA programs contribute to the long-term success of healthcare institutions.

You are being asked to complete the survey if you fit the requirements. The qualifying criteria is to be a healthcare professional (HCP - nurse practitioners, medical assistants, nurses, clinicians, nurse managers, physicians, doctors etc.) or administrators who is currently employed in a healthcare organization.

Thank you for taking the time to read this and consider participating in this study.

APPENDIX E

The Sustainability Assessment Tool for Healthcare Organization (SATHO)

"Sustainability Assessment Tool for Healthcare Organizations" (SATHO)

General Instructions: This survey contains approximately 40 statements and questions. Please read each item and indicate how you feel about it. Sometimes you will indicate your answer by clicking to the right of the statements. Other times you will indicate your answer by typing in your response. Each section begins with its own set of instructions, so make sure you read them carefully as you move through the items.

Please answer every item. There are no right or wrong answers and you need not be an expert to complete this survey. Try to describe yourself honestly and accurately but don't spend too much time on any one question or statement. Just give the answer you think best applies.

A

1. What is your current role within your organization
(a) Manager (b) Director (c) Vice President/SVP (d) C-Suite/Board Member
2. What type of healthcare institutions are you with
(a) Community (b) State
3. Number of Years in the Organization _____
4. Has your organization adopted a program under the 2010 Affordable Care Act
(a) Yes (b) No (c) Not Sure
5. Number of Years in the ACA related program:
(a) Less than 12 months (b) Greater than 12 months
6. Perceived Sustainability of the ACA related program - *Sustainability – the ability to maintain a program and its benefits over time*
(a) Not Sustainable (b) Somewhat Sustainable (c) Moderately Sustainable
(d) Very sustainable (e) Not Sure

B

In the following questions, you will rate your program across a range of specific factors that affect sustainability. Please respond to as many items as possible. If you truly feel you are not able to answer an item, you may select "NA." For each statement, circle the number that best indicates the extent to which your program has or does the following things:

Please indicate your agreement or disagreement with the following items by selecting a button to the right of each statement. For example, if you "Strongly Agree" with the statement, you would select the corresponding button.

**Program in the context of this study is the adoption or implementation of a set of activities in compliance with the Patient Protection and Affordable Care Act (2010)*

		To a very great extent	Not able to answer
To Little or no extent			

1. **Environmental Support:** Having a supportive internal and external climate for your program
 - a. Champions exist who support the program
1 2 3 4 5 6 7 NA
 - b. The program has strong champions with the ability to garner resources.
1 2 3 4 5 6 7 NA
 - c. The program has leadership support from within the larger organization.
1 2 3 4 5 6 7 NA
 - d. The program has leadership support from outside of the organization.
1 2 3 4 5 6 7 NA
 - e. The program has strong public support.
1 2 3 4 5 6 7 NA

"Sustainability Assessment Tool for Healthcare Organizations" (SATHO)

	To Little or no extent								To a very great extent	Not Able to Answer
2. Funding Stability: Establishing a consistent financial base for your program										
a. The program exists in a supportive state economic climate.	1	2	3	4	5	6	7	NA		
b. The program implements policies to help ensure sustained funding.	1	2	3	4	5	6	7	NA		
c. The program is funded through a variety of sources.	1	2	3	4	5	6	7	NA		
d. The program has a combination of stable and flexible funding.	1	2	3	4	5	6	7	NA		
e. The program has sustained funding.	1	2	3	4	5	6	7	NA		
3. Partnerships: Cultivating connections between your program and its stakeholders										
a. Diverse community organizations are invested in the success of the program.	1	2	3	4	5	6	7	NA		
b. The program communicates with community leaders.	1	2	3	4	5	6	7	NA		
c. Community leaders are involved with the program.	1	2	3	4	5	6	7	NA		
d. Community members are passionately committed to the program.	1	2	3	4	5	6	7	NA		
e. The community is engaged in the development of program goals.	1	2	3	4	5	6	7	NA		
4. Organizational Capacity: Having the internal support and resources needed to effectively manage your program and its activities										
a. The program is well integrated into the operations of the organization.	1	2	3	4	5	6	7	NA		
b. Organizational systems are in place to support the various program needs.	1	2	3	4	5	6	7	NA		
c. Leadership effectively articulates the vision of the program to external partners.	1	2	3	4	5	6	7	NA		
d. Leadership efficiently manages staff and other resources.	1	2	3	4	5	6	7	NA		
e. The program has adequate staff to complete the program's goals.	1	2	3	4	5	6	7	NA		
5. Program Evaluation: Assessing your program to inform planning and document results										
a. The program has the capacity for quality program evaluation.	1	2	3	4	5	6	7	NA		
b. The program reports short term and intermediate outcomes.	1	2	3	4	5	6	7	NA		
c. Evaluation results inform program planning and implementation.	1	2	3	4	5	6	7	NA		

"Sustainability Assessment Tool for Healthcare Organizations" (SATHO)

To a little or no extent To a very great extent Not Applicable

- d. Program evaluation results are used to demonstrate successes to funders and other key stakeholders.

1 2 3 4 5 6 7 NA

- e. The program provides strong evidence to the public that the program works.

1 2 3 4 5 6 7 NA

6. **Program Adaptation:** Taking actions that adapt your program to ensure its ongoing effectiveness

- a. The program periodically reviews the evidence base.

1 2 3 4 5 6 7 NA

- b. The program adapts strategies as needed.

1 2 3 4 5 6 7 NA

- c. The program adapts to new science.

1 2 3 4 5 6 7 NA

- d. The program proactively adapts to changes in the environment.

1 2 3 4 5 6 7 NA

- e. The program makes decisions about which components are ineffective and should not continue.

1 2 3 4 5 6 7 NA

7. **Communications:** Strategic communication with stakeholders and the public about your program

- a. The program has communication strategies to secure and maintain public support.

1 2 3 4 5 6 7 NA

- b. Program staff communicate the need for the program to the public.

1 2 3 4 5 6 7 NA

- c. The program is marketed in a way that generates interest.

1 2 3 4 5 6 7 NA

- d. The program increases community awareness of the issue.

1 2 3 4 5 6 7 NA

- e. The program demonstrates its value to the public.

1 2 3 4 5 6 7 NA

8. **Strategic Planning:** Using processes that guide your program's direction, goals, and strategies

- a. The program plans for future resource needs.

1 2 3 4 5 6 7 NA

- b. The program has a long-term financial plan.

1 2 3 4 5 6 7 NA

- c. The program has a sustainability plan.

1 2 3 4 5 6 7 NA

- d. The program's goals are understood by all stakeholders.

1 2 3 4 5 6 7 NA

- e. The program clearly outlines roles and responsibilities for all stakeholders.

1 2 3 4 5 6 7 NA

"Sustainability Assessment Tool for Healthcare Organizations" (SATHO)

C Open - Ended Questions

1. What is your perception of your organizations' adoption of programs under the ACA and its implementation process?? - *Please explain fully* -

2. How can your organization improve its prospect for long-term sustainability?
- *Please explain fully* -

D Demographic

a. What age group best describes you

- (a) 18 - 30 (b) 31-40 (c) 41 - 50 (d) 50-60 (e) 60+

b. In what state is your organization located _____

c. Please select all degrees and /or certificates that you have obtained with regards to your education

1. Certificate

a. *Please Specify* _____

2. Associate

3. Baccalaureate

4. Masters

5. MD/DO

6. PhD (Doctorate)

7. Other _____

d. What is your gender

- (a) Male (b) Female

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APPENDIX F

The Program Sustainability Assessment Tool (PSAT)

Program Sustainability Assessment Tool

What is program sustainability capacity?

We define program sustainability capacity as the ability to maintain programming and its benefits over time.

Why is program sustainability capacity important?

Programs at all levels and settings struggle with their sustainability capacity. Unfortunately, when programs are forced to shut down, hard won improvements in public health, clinical care, or social service outcomes can dissipate. To maintain these benefits to society, stakeholders must understand all of the factors that contribute to program sustainability. With knowledge of these critical factors, stakeholders can build program capacity for sustainability and position their efforts for long term success.

What is the purpose of this tool?

This tool will enable you to assess your program's current capacity for sustainability across a range of specific organizational and contextual factors. Your responses will identify sustainability strengths and challenges. You can then use results to guide sustainability action planning for your program.

Helpful definitions

This tool has been designed for use with a wide variety of programs, both large and small, across different settings. Given this flexibility, it is important for you to think through how you are defining your program, organization, and community before starting the assessment.

Below are a few definitions of terms that are frequently used throughout the tool:

- **Program** refers to the set of formal organized activities that you want to sustain over time. Such activities could occur at the local, state, national, or international level and in a variety of settings.
- **Organization** encompasses all the parent organizations or agencies in which the program is housed. Depending on your program, the organization may refer to a national, state, or local department, a nonprofit organization, a hospital, etc.
- **Community** refers to the stakeholders who may benefit from or who may guide the program. This could include local residents, organizational leaders, decision-makers, etc. Community does not refer to a specific town or neighborhood.



Program Sustainability Assessment Tool

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The name of the program or set of activities I am assessing is:

In the following questions, you will rate your program across a range of specific factors that affect sustainability. Please respond to as many items as possible. If you truly feel you are not able to answer an item, you may select "NA." For each statement, circle the number that best indicates the extent to which your program has or does the following things.

Environmental Support: Having a supportive internal and external climate for your program

	To little or no extent	1	2	3	4	5	6	7	Not able to answer
1. Champions exist who strongly support the program.	1	2	3	4	5	6	7	NA	
2. The program has strong relations with the ability to gain resources.	1	2	3	4	5	6	7	NA	
3. The program has leadership support from within the larger organization.	1	2	3	4	5	6	7	NA	
4. The program has leadership support from outside of the organization.	1	2	3	4	5	6	7	NA	
5. The program has strong public support.	1	2	3	4	5	6	7	NA	

Funding Stability: Establishing a consistent financial base for your program.

	To little or no extent	1	2	3	4	5	6	7	Not able to answer
1. The program exists in a supportive state economic climate.	1	2	3	4	5	6	7	NA	
2. The program implements policies to help attract external funding.	1	2	3	4	5	6	7	NA	
3. The program is funded through a variety of sources.	1	2	3	4	5	6	7	NA	
4. The program has a combination of public and private funding.	1	2	3	4	5	6	7	NA	
5. The program has sustained funding.	1	2	3	4	5	6	7	NA	

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For each statement, circle the number that best indicates the extent to which your program has or does the following things.

Partnerships: Cultivating connections between your program and its stakeholders

	To help or as much							To a very great extent	Not able to answer
1. Other community organizations are involved in the success of the program.	1	2	3	4	5	6	7	NA	
2. The program communicates with community leaders.	1	2	3	4	5	6	7	NA	
3. Community leaders are involved with the program.	1	2	3	4	5	6	7	NA	
4. Community members are personally involved in the program.	1	2	3	4	5	6	7	NA	
5. The community is engaged in the development of program goals.	1	2	3	4	5	6	7	NA	

Organizational Capacity: Having the internal support and resources needed to effectively manage your program and its activities

	To help or as much							To a very great extent	Not able to answer
1. The program is well integrated into the operations of the organization.	1	2	3	4	5	6	7	NA	
2. Organizational systems are in place to support the various program goals.	1	2	3	4	5	6	7	NA	
3. Leadership effectively articulates the vision of the program to external partners.	1	2	3	4	5	6	7	NA	
4. Leadership effectively manages staff and other resources.	1	2	3	4	5	6	7	NA	
5. The program has adequate staff to complete the program's goals.	1	2	3	4	5	6	7	NA	

Program Sustainability Assessment Tool v2

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For each statement, circle the number that best indicates the extent to which your program has or does the following things.

Program Evaluation: Assessing your program to inform planning and document results

	To little or no extent							To a very great extent	Not able to answer
1. The program has the capacity for quality program evaluation.	1	2	3	4	5	6	7	NA	
2. The program reports short term and intermediate outcomes.	1	2	3	4	5	6	7	NA	
3. Evaluation results inform program planning and implementation.	1	2	3	4	5	6	7	NA	
4. Program evaluation results are used to demonstrate successes to funders and other key stakeholders.	1	2	3	4	5	6	7	NA	
5. The program provides strong evidence to the public that the program works.	1	2	3	4	5	6	7	NA	

Program Adaptation: Taking actions that adapt your program to ensure its ongoing effectiveness

	To little or no extent							To a very great extent	Not able to answer
1. The program periodically reviews the evidence base.	1	2	3	4	5	6	7	NA	
2. The program adapts strategies as needed.	1	2	3	4	5	6	7	NA	
3. The program adapts to new science.	1	2	3	4	5	6	7	NA	
4. The program proactively adapts to changes in the environment.	1	2	3	4	5	6	7	NA	
5. The program makes decisions about which components are ineffective and should not continue.	1	2	3	4	5	6	7	NA	

Program Sustainability Assessment Tool v2

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For each statement, circle the number that best indicates the extent to which your program has or does the following things.

Communications: Strategic communication with stakeholders and the public about your program

	To little or no extent							To a very great extent	Not able to answer
1. The program has communication strategies to secure and maintain public support.	1	2	3	4	5	6	7	NA	
2. Program staff communicate the need for the program to the public.	1	2	3	4	5	6	7	NA	
3. The program is marketed in a way that generates interest.	1	2	3	4	5	6	7	NA	
4. The program increases community awareness of the issue.	1	2	3	4	5	6	7	NA	
5. The program demonstrates its value to the public.	1	2	3	4	5	6	7	NA	

Strategic Planning: Using processes that guide your program's direction, goals, and strategies

	To little or no extent							To a very great extent	Not able to answer
1. The program plans for future resource needs.	1	2	3	4	5	6	7	NA	
2. The program has a long-term financial plan.	1	2	3	4	5	6	7	NA	
3. The program has a sustainability plan.	1	2	3	4	5	6	7	NA	
4. The program's goals are understood by all stakeholders.	1	2	3	4	5	6	7	NA	
5. The program clearly outlines roles and responsibilities for all stakeholders.	1	2	3	4	5	6	7	NA	



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APPENDIX G

Full List of Open Ended Responses Received from
Survey Participants

1. Administrator

We intend to work through the difficulties and work to reach resolutions as needed. Better strategic planning, improved communication to public and between senior leadership and the rest of the organization.

2. Other (please specify)

Mission is culturally appropriate care within the community. We need single payer healthcare for all in the US

3. Other (please specify)

Our program is implemented in struggling public hospitals and strives to meet the social needs of patients as well as physical ones. One of the main issues our program is facing is the hospital is not renewing our contract and some of us will be let go in September. We benefit from the ACA and the expansion of Medicare. Our organization needs to secure contracts for more than a year.

4. Nurse

Currently due to the high cost of care and a large population of uninsured, our hospital system is feeling the strain. There must be a compromise reached in Washington to avoid hospitals from having to forgive so many charges. Everyone wants the services, but no one wants to pay for them. Ashamed that our elected officials can't admit that they know nothing about healthcare and should leave this up to the private sector. Washington needs to devise a way to cover more healthcare without unloading these problems on the individual states and providers.

5. Specialist Physician

I feel that the costs are too high

6. Manager

Receive payment through programs. Adapting to changes within the payment system

7. Nurse

Our relationship is just that more patients are able to get in and get seen by the therapists with coverage. Long term without the

ACA patients might not be seen. Our long term success relies on insurance companies continuing to reimburse. Without reimbursement patients will not be willing to pay for therapy.

8. Other (please specify)

We are funded through the state. Our funding depends upon what is going on with the politicians and how they can advocate for us. This does not always make room for long term responsibilities and sustainability. Work more closely with the legislator.

9. Specialist Physician

we do not interact with ACA management. We just follow

10. Other (please specify)

Specialist Physician Insecurity of ACA insured. Substitute for the ACA Nurse The one major problem our institution has is with adequate staffing to ensure that patient satisfaction remains high, so that nurses can have adequate time to perform all tasks/fill out extra paperwork associated with HCAHPS and other "core measures". Our institution needs more government funding in order to remain open and able to provide services to the community. Additionally, grants or donations would be a great help.

11. Nurse

In terms of looking at our relationship. I don't know of anyone looking at that specifically. However, I am not in admin. 1. Stop closing clinics for meetings! Not very profound, but lots of lost revenue. 2. Create teams in primary care clinics. This means stop moving providers to multiple different clinics in the course of a week. If providers & staff are committed to the clinic community, better care & higher job satisfaction ensues. 3. Communicate this to the community through advertising. 4. Division should espouse these goals.

12. Primary Care Physician (PCP/GP/FP)

The ACA by design will fail. It was set up to fail and it is failing as originally planned by its creators. It is not rocket science for the insider. This was easily predicted from the first day of its implementation as said by Vladimir Lenin, "The Keystone to Socialism is through government control of the people's healthcare." This holds true today. Unless in the very least the ACA is repealed and

repealed on for the ultimate purpose to completely replace it, there will be no long term success and it will lead directly into a single payer platform.

13. Nurse

NONE OBAMA CARE IS NOT AFFORDABLE BUT UNAFORDABLE. HAVE TALKED TO SOME WHO TRIED IT. SOCIALIZED MEDICNE IS NOT WORTH A DAMN. LOOK AT ENGLAND AND CANADA. PEOPLE IN ENGLAND HAVE TO WAIT UNTILE THEY ARE COMPLETELY BLIND BEFORE MACULAR DEGENERATION IS TREATED. TOO DAMN LATE. THE VERY RICH ARE COMMING TO THE USA FOR SURGICAL SERVICES AND LONG TERM CARE. THOSE SUFFERING FROM TBI. DO NOT WISH TO ANSWER FOR FEAR MY WORDS WILL GET INTO THE HANDS OF THE WRONG PEOPLE. MY ORGANIZATION IS IN A HELL OF A STATE. I WILL BE SURPRIZED IF IT CAN EXIST FOR 1-2 YEARS.

14. Other (please specify)

aca is not sustainable. It makes the few who are working pay for those who don't. The few who work can't afford to pay this premium, they can't afford to pay this deductible. The ones who work have no health care regardless of what is SAID and most everyone knows this
aca is not sustainable. We need competition to get prices down and options, like catastrophic insurance. I want to INSURANCE not some warranty that I have to pay huge amounts for!!! I want to pay SMALL PREMIUMS with HIGH DEDUCTABLES for a catastrophe so I don't go broke. I DO NOT want to go broke providing health care for the whole populace

15. Manager

Developing continuously
Reviews, discussions, research and implementation

16. Other (please specify)

My agency accepts some insurances under the ACA but not all. Our billing department is weak, perhaps understaffed so it's not clear if or how we could do better. It needs to hire and train more people to deal with all the various insurances.

17. Manager

Seems to be more worried about cost than delivery. Need to be more staff oriented then cost. Get staff more on board and cost can go down.

18. Sr/Director

We always have alternative plans developed, attempting to be proactive finding other funding sources

19. Other (please specify)

Our facility serves low income patients. Having ACA makes the care of this group possible. Sustainability is unknown as the political climate may not ensure the future of ACA. It will probably depend on the continued financial support of the state and federal government

20. Sr/Director

ACA adoption has improved the delivery of healthcare. Even though its financial impact has been not so positive, it is very sustainable. Improve its participation and meet all available requirements

21. SVP/Vice President

Dysfunctional. Our organization is economically sound and not aware of the reality of the ACA and almost in a state of denial accept the reality and communicate with the community and build a shared vision

22. Sr/Director

The main issue we have with any third party payer is getting services covered even when precertification and recertification are approved and documented. We must have excellent quality metrics, low cost, and a positive bottom line.

23. Sr/Director

We represent an older population and our payment is funded by about 85% Medicaid. We do not think the funding for Medicaid, nor the cost of living for the facility or residents, have been fully recognized. Medicaid pays a great deal of our funding and a lot of other facilities in the state. Help the state government realize how much money is actually spent on long term care and the need for cost of living expenses generated with long term care.

24. C-Suite/Board Member

All done as result of ACA. If substantially altered we will gladly decrease efforts. Continue to provide better care than others

25. Sr/Director

The CMS star rating effects relationships between providers. CMS star rating and professionals who are educated in healthcare services.

26. Sr/Director

The programs will not be successful until the physician and patients have a financial incentive to utilize them. We need to establish the programs with the payouts who will direct the patients directly to the programs.

27. Manager

We do not speak in terms of ACA...we however implement any program needed or required by law. Some of these may be under ACA. Having a particular department responsible for keeping up to date on the ACA and all of its components. Use the language that the ACA uses and directly mention the relationship when implementing an initiative associated with it.

28. Sr/Director

Prospects for long term sustainability are limited in scope for those organization who remain single provider based. ACA perceived care of delivery rewards larger providers with a full scope of services and purchasing power. Our long term success is directly related to our payer mix and geography. In the future long term success will be determined by our relationships with other healthcare entities including hospitals, physicians groups and outpatient service ventures.

29. Manager

30. ACA is strongly supported and if capacity is demonstrated, the institution will expand programs. Expand support from all stakeholders.

31. Sr/Director

Having more community involvement and engagement. Many patients do not understand the plans and how they work. We are continually

educating patients and letting them know who and who is not in network. Need the ability to cross counties with some of the plans for 1/2 of the patient population is not able to get plans for closest hospital.

32. Sr/Director

There really is a shaky relationship between my healthcare institution and the aca due to the uncertainty of state legislation. By having a more open dialogue with local government officials and defining its goals better.

33. Manager

The delivery of care is progressing under the ACA while it stays focused on programs sustainability. There have been various changes, from outpatient care to our preventative programs.

The biggest issue is public outreach, the only way it can be achieved is through a stronger focus on reaching consumers

34. C-Suite/Board Member

The public should be more involved. Founders should participate with in the program more often than what little they already do.

35. Other (please specify) to be honest we have a person who takes this actions for the clinic with the boss. So I do not know how Aca act is with us

36. Manager

My institutions relationship relies on the Ava to a certain extent because the Ava outlines the relationship within its existence if it applies. It could be improved by bringing forth more financial resources to make sure the program remains stable.

37. Sr/Director

The ACA directly effects my hospitals ability to sustain itself. We have adapted our care plans to reflect the requirements set for us.

Continue to follow best practice and monitor outcomes to the best of our ability.

38. Other (please specify)

My Governor refused to take the exchanges making it difficult to get the program to work correctly in my State If the program was used as it was intended I believe it would be an efficient and well used program.

39. Other (please specify)

Periodic evaluation towards outcomes and re-evaluation of levels of care requirements for patients and ongoing support. We have become an FQHC as a way to improve sustainability as ACA is not guaranteed given the immaturity of our government in Washington.

40. Sr/Director

Finding opportunities with the ACA is a central focus of the institution. In fact, the institution has been used by President Obama as an example of how health care organization work within the ACA. Continuing to adapt

41. Manager

We are still working on how to adapt to the ACA Provide high quality cost-efficient patient care and demonstrate that we are doing this.

42. Manager

Access via appointments will continue to be an issue for ACA patients as pre-certifications and benefits are difficult to obtain from both plan members and healthcare providers. Patients are rarely aware of their benefits and are expecting the healthcare organization to explain to them rather than the plan's resources. Continued internal communication of directions and goals, along with strong marketing within the community.

43. Other (please specify)

The institution is aware of future changes and is implementing strategies now to address them Perhaps find a way to include more healthcare providers in decision making as it pertains to efficient delivery of healthcare

44. SVP/Vice President

We believe that most of the changes to care delivery are inevitable. We need to adapt from fee for service to new payment models.

45. Manager

Diversification is the key to success. Having a wide array of staff and positions to administer services appropriately. By obtaining ongoing business and building relationships.

46. SVP/Vice President

"There is a vision for outreach to the community and transitioning care to the patient and home, however no clear plan that I am aware of nor, insurance companies are not covering the degree of home care that would be required. Majority of measures focus on key outcomes within the hospital, such as hospital-acquired infections etc. " no aware on that level, hopefully there is a well-structured group addressing the community needs and forecasting for the future

47. SVP/Vice President

Currently only supporting the program for the financial return Devote greater resources to allow the program to grow

48. Manager

That it isn't sustainable at all and more institutions will drop out of the programs. My organization has decided to drop out of the ACA

49. Manager

Primary care is the foundation of the ACO model. With the shortage of primary care physicians, nurses—who are frontline providers and valuable information liaisons—can play an important role and should be included in care management and workflow design. Care must be coordinated across the entire continuum of healthcare providers. Education across the clinical setting, physician to physician, nursing and encouraging and engaging the patient's decision making with their own care.

50. Manager

The institution has a commitment to excellence from service to care as it relates to outcomes and patient care. However additional resources will be key to be able to keep up in the future and all requirements that are necessary. Our program needs more resources across our multidisciplinary team. By having more resources we will be able to maintain our current patient volumes and have the ability to grow and maintain strong in a competitive market