THEORY-BASED EVALUATION OF A CANCER CONTROL COALITION

By

Yll Hyseni

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This thesis was presented

By

Yll Hyseni

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and approved by

Thesis Advisor:
Patricia I. Documét, MD, DrPH
Assistant Professor
Department of Behavior and Community Health Sciences
Graduate School of Public Health
University of Pittsburgh

Committee Member:
Evelyn O. Talbot, DrPH, MPH
Professor
Department of Epidemiology
Graduate School of Public Health
University of Pittsburgh

Committee Member:
Christopher R. Keane, ScD, MPH
Assistant Professor
Department of Behavior and Community Health Sciences
Graduate School of Public Health
University of Pittsburgh

Patricia I. Documét, MD, DrPH

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ABSTRACT

Coalitions are voluntary collaborations and interactions between two or more agents that yield synergy for problem solving. Their use as means of addressing community health concerns has increased during the past decades. This study uses the Community Health Governance (CHG) model to describe and analyze the interaction between various coalition components from data derived from the Pennsylvania Cancer Control Consortium (PAC3).

The study used an already established questionnaire, designed to measure concepts of Leadership, Management, and Critical characteristics of the process, Empowerment, Synergy and Bridging Social Ties as put forth by the CHG model. An electronic invitation was sent to current PAC3 members to complete the questionnaire. Using PAC3 survey responses, I compared the association between variables using the Chi Square test of independence.

A total of 162 survey responses were included in the analysis (RR=21.6). PAC3 members' Empowerment was significantly associated with three of the four Leadership measures, three of the five variables measuring the concept of Management and two of the four measures of Critical characteristics of the process ($p<0.05$).

Member's ability to Bridge social ties showed a statistically significant association with most measures of Leadership, two of five measures of Management, and two of the four variables measuring Critical characteristics of the process ($p<0.05$). Synergy showed a statistically significant association with two of the four variables measuring Leadership, two of the five variables measuring Management and one of the four Critical characteristics of the process variables ($p<0.05$).

This study reports the observed interaction of the various coalition components. It presents recommendations on potential improvement to coalition building practices and reinforces the importance of evidence based best practices. The public health significance of this study corresponds to the potential use of the study results in public health practices, such as coalition building, improvement and maintenance. Specifically regarding the Pennsylvania Cancer Control Consortium, the study results will facilitate the fulfillments of its missions.

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PREFACE

Special thanks to Dr. Patricia Documét for her guidance and support during the course of this project.

1.0. INTRODUCTION

Coalitions have been used as means of addressing community health concerns for the past several decades. With the increased recognition of the need for such collaborations and their association with community health, there has been increased concern with their efficiency. Today, funding agencies require formal evaluations of the work of funded coalitions in order to decide whether to continue supporting specific coalitions. Evaluations provide information on coalition establishment and development, its internal and external dynamics and its efficiency in regards to its objectives.

Because coalitions have complex structures, their efficiency and success have been difficult to predict and measure. Many researchers have embarked on studies which attempt to explain factors associated with coalition effectiveness and success. Researchers have developed several theoretical models that aim to describe the essential components of coalitions that predict success and efficiency.

The aim of this study is to measure the association between the various components of coalitions. The study sample consists of members of the Pennsylvania Cancer Control Consortium (PAC3). The Community Health Governance (CHG) model is the theoretical framework on which the coalition assessment is based.

This utilization-focused evaluation aims at producing concrete information enabling PAC3 to make corrections midcourse based on specific elements measured. In addition, this study attempts to develop generalizable knowledge regarding coalition building and methods of coalition evaluation.

The study aims to answer the following questions:

- To what extent are PAC3 members bridging social ties and achieving outcomes of individual empowerment and synergy, as elements of a successful coalition?
- Are characteristics of leadership and management, critical characteristics of the process as defined by the CHG model, adequately addressed by PAC3?
- Are leadership, management and critical characteristics of the process related to the extent to which PAC3 members are bridging social ties, achieving individual empowerment and synergy?

2.0. LITERATURE REVIEW

2.1. DEFINITION OF COALITIONS

Most definitions portray coalitions as collaborations between diverse stakeholders from multiple levels on issues of interest. Coalitions are voluntary collaborations and interactions consisting of two or more agents or forces that yield synergy and problem solving. Coalitions include synergistic collaborations between institutions such as government institutions, nonprofit agencies, businesses and academia as well as interested individuals and community representatives (Cramer, Atwood et al. 2006).

The concept of "Coalition" is used to refer to locally bound coalitions such as community coalitions as well as other types of coalitions, such as those bound to geographical areas or common interests such as state coalitions or cancer coalitions. The main characteristics that can be used to set coalitions apart include the defined scope of program intervention, the social-ecological level of health determinants and the definitions used for community and community participant. The social-ecological model is conceptual framework for understanding factors from various levels and their impact on health. The model asserts that health determinants must be understood from environmental, intrapersonal, interpersonal, community and policy levels. This characterization is important knowing the importance of community participation in the problem solving process.

The use of coalitions as a medium of change and health promotion has increased in the past two decades and it has become an accepted structure for community development and community engagement (Kreuter, Lezin et al. 2000; Berkowitz 2001; Cramer, Atwood et al.

2006). Organizations find the structure and collaborative mechanism of coalitions appropriate to their work, given that community participation provides reciprocal benefits to them and the beneficiaries of their program. This is so since organizations benefit by receiving the support and recognition of the community, by recruiting volunteers and by understanding different perspectives on health issues, whereas the community would benefit by having a stake on the decisions made regarding issues pressing to the community.

2.1.1. Aims of Coalitions

Coalitions aspire to identify and address the whole spectrum of factors which influence the health and wellbeing of communities, including social, political as well as individual factors affecting community health. By bringing together a variety of stakeholders and agents, coalitions attempt to address these factors (Stokols 1996; Cramer, Atwood et al. 2006). The involvement of multilevel forces enable coalitions to establish approaches that incorporate the strengths of stakeholders and accomplish more than individual organizations would by working alone. Recognizing that health issues are affected by factors at different levels, coalitions operate within a wider social-ecological framework in order to address issues from the appropriate ecological levels (Goodman, Wandersman et al. 1996; Lachance, Houle et al. 2006).

2.1.2. Social Justice

Coalitions and community coalitions in particular resemble grassroots organizations, given that coalitions emphasize the representation of all affected and concerned groups within the coalition and are concerned with the social justice and empowerment as well as the importance of participation of organizations and communities (Berkowitz 2001). Coalitions have become the means through which the interests of communities and organizations are addressed, and the ground on which knowledge, expertise and resources of stakeholders are shared to address issues of concern (Granner and Sharpe 2004; Wells, Ford et al. 2006).

2.1.3. Factors of Success

The process of establishing coalitions, successfully managing their development, continuously evaluating their performance and adapting to needed changes is an arduous task. Researchers agree that the complexity of coalition building and functioning is often underestimated, and they emphasize the importance of empirical studies in defining best practices and characteristics of coalition functioning (Kegler, Steckler et al. 1998; Kreuter, Lezin et al. 2000; Berkowitz 2001). In an attempt to establish best practices, studies have identified several factors of success such as leadership, communication of goals and the vision of coalitions, the type of coalition participants, leadership, and the coalition's overall approach as the main indicators of coalition success.

2.1.4. Leadership and Vision

The importance of coalition leadership has been emphasized because of the role of leadership in the development, progress and maintenance of coalition (Butterfoss, Lachance et al. 2006). Coalition leadership is responsible for choosing collaborating partners from the community, academia, and business, communicating the coalition's goals and visions to members as well as establishing the grounds of coalition processes and initial activities. Coalition leadership, which employs open and collaborative decision making styles that are empowering in nature, has been found to indirectly impact member participation level (Lasker, Weiss et al. 2001; Metzger, Alexander et al. 2005). Such leadership is vital in coalitions, given that most members are voluntary participants. Coalition leadership that understands and appreciates a wide spectrum of viewpoints and sees sharing of power and resources as a fundamental part of coalitions work is another factor of coalition success (Lasker, Weiss et al. 2001).

2.1.5. Broad Participation

One of the main strengths of coalitions is the utilization of stakeholder knowledge and expertise to assess community needs and capacities, develop goals and objectives and divide tasks based on expertise (Wells, Ford et al. 2006). Recruiting community stakeholders and volunteers as well as establishing ties with other organizations has also been identified as an area which coalitions must focus (Kegler, Steckler et al. 1998; Wells, Ford et al. 2006). Broad participation is a vital factor in community capacity building. Social ties and the development of

new networks facilitate the process of expertise sharing between coalition members of various backgrounds. Expertise sharing includes the sharing of skills and knowledge which benefit members in addressing complex community issues by utilizing acquired individual, organizational and policy knowledge (Goodman, Wandersman et al. 1996; Kreuter, Lezin et al. 2000; Cramer, Atwood et al. 2006).

Based on the Community Health Governance model developed by Lasker and Weiss, coalition leadership must "promote broad and active participation" (Lasker, Weiss et al. 2001) and promote the "buy in" from new members. This "buy in" results from outreach efforts from coalition leadership, efforts to communicate the vision, objectives and aims of the coalition (Butterfoss, Goodman et al. 1996). Based on the premises of social justice, coalition members believe that community representation in coalitions is a fundamental democratic right, and the degree of such representation is another factor of coalition success (Lasker and Weiss 2003). Coalition members who are familiar with the capacities and needs of their community are essential coalition stakeholders. Their participation is needed to establish synergy and an environment where comprehensive solutions to problems can be reached (Lasker, Weiss et al. 2001; Lasker and Weiss 2003; Granner and Sharpe 2004).

2.1.6. The Social - Ecological Approach

Another factor of coalition success identified in the literature is a coalition's attempt to address issues from multiple levels. This socio-ecological approach emphasizes the role of social ties and social networks because of their potential to "catalyze" the establishment of synergy, its ability to promote the change of individual risk behaviors and to provide health education. (Wandersman, Valois et al. 1996; Kreuter, Lezin et al. 2000)

In order to address health issues from a wider and comprehensive approach, coalitions aspire to establish synergy. Synergy, which has been described as the ability of collaborations to transform comprehensive problem solving ideas into comprehensive and practical solutions to problems (Lasker, Weiss et al. 2001) promotes problem solving by encouraging creative thinking and it facilitates this process by engaging stakeholders from multiple levels into the decision making process.

2.2. MEASUREMENT OF COALITION FUNCTIONING

In recent years, issues regarding the measurement of coalition functioning have surfaced in the scientific literature. The increasing utilization of coalitions in our society has pressured funding agencies to evaluate the functioning and impact of these coalitions. Methodological challenges surface when such a task is attempted. These limitations have been the major reason for the lack of evidence based studies on coalition effectives (Zakocs and Edwards 2006). Methodological problems include the inability of researchers to control variables involved in coalition functioning, to explain association and causal interactions among coalitions and its

objectives, the long post intervention time required to see results which can be attributed to community-based interventions, various threats to validity and issues regarding sample representation and bias (Berkowitz 2001; Lachance, Houle et al. 2006; Zakocs and Edwards 2006). Systematic empirical research that evaluate coalition functioning and effectiveness are lacking and such studies are required in order to ensure coalition success and justify program funding, (Granner and Sharpe 2004).

Literature on coalitions identifies only a small number of empirical studies measuring the functioning of coalitions. Current literature is geared towards a case study approach, which provides useful information on coalition functioning, but is limited by its lack of generalizability to other coalitions (Kreuter, Lezin et al. 2000; Berkowitz 2001; Granner and Sharpe 2004).

A literature review by Zakocs et al. (2006) of studies assessing coalition effectiveness yielded that in 16 of 26 studies the most common instrument for measuring coalition effectiveness indicators was coalition member self-report. Indicators used in assessing coalition effectiveness in the studies reviewed were synergy, member and group empowerment and collaboration (Zakocs and Edwards 2006). Five or more studies in Zakocs et al (2006) literature review identified leadership styles, membership participation, membership diversity and member/agency collaboration as factors positively associated with indicators of coalition effectiveness (Zakocs and Edwards 2006). Only two of the 26 examined studies were guided by an existing conceptual framework, and nine of the studies examined presented no explanation for the reasons for selection their coalition functioning measures (Zakocs and Edwards 2006).

2.3. THEORIES OF COALITION FUNCTIONING AS TOOLS OF COALITION MEASUREMENT

An attempt in structuring coalition concepts in order to simplify the measurement process has been the use of theoretical frameworks as tools for assessing coalition effectiveness and functioning. These theoretical frameworks such as the Community Health Governance (CHG) developed by Lasker and Weiss (2003), the Community Coalition Action Theory (CCAT) developed by Butterfos and Kegler (2004), and the Internal Coalition Outcome Hierarchy (ICOH) developed by Cramer et al. (2006) use research findings in organizing their theoretical constructs and propose specific indicators as measures of coalition effectiveness and functioning.

While many of the concepts of the identified theoretical frameworks overlap, there are notable differences in their attempt to explain coalition functioning. The CCAT is a broad theory of coalitions which incorporates concepts such as community development, group processes, citizen participation and inter-organizational relationships (Granner and Sharpe 2004). Several of the CCAT concepts are beyond the scope of this evaluation research. The CHG model provides a detailed conceptualization of intra-organizational processes important to coalition effectiveness. In addition to these differences, prior PAC3 evaluations were based on the CHG model, and concept operationalization was already completed. In contrast to the Internal Coalition Outcome Hierarchy (ICOH), the CHG model assumes temporality where Leadership, Management and Critical characteristics of the process affect other constructs of the model. Therefore more attention is paid to its conceptual structure. The following paragraphs describe the CHG model and at the same time present important information on the CCAT theory and ICOH.

The Community Health Governance (CHG) model proposed by Lasker and Weiss is a multidisciplinary approach to coalition functioning, directed by the consideration that participatory processes and procedures are vital in community health and they can result in effective "community problem solving and improvements in community health." The CHG model proposes elements and actions which are elemental to successful collaboration (Lasker and Weiss 2003). Similar to the CHG model, the Community Coalition Action Theory (CCAT) developed by Butterfoss and Kegler, integrates coalition building concepts, steps and actions into their theory (Granner and Sharpe 2004).

Lasker and Weiss suggest that in order for coalitions to increase the efficiency and capacity of health problem solving, the collaborative process must empower individuals, bridge social ties and create synergy (Lasker and Weiss 2003). These three elements will directly affect community health as well as enhance "the capacity of the collaborative process to solve health problems" (Lasker and Weiss 2003).

Similar to the CHG model, the CCAT includes leadership, community member participation, planning, establishment of social ties in the form of inter-organizational networks and relationships and processes of community development as conceptual constructs of their theory (Butterfoss 2004; Granner and Sharpe 2004). The CCAT uses these conceptual constructs as measurements of coalition capacity and sustainability (Kluhsman, Bencivenga et al. 2006).

Leadership and management, and several critical characteristics of the collaborative process are considered as fundamental elements for coalition success. The role of leadership is also emphasized in the Internal Coalition Outcome Hierarchy (ICOH) developed by Cramer et al. the ICOH model assumes that coalitions must understand the role of leadership in order for

community members and coalition members to accept and support the mission and coalition goals. (Cramer, Atwood et al. 2006)

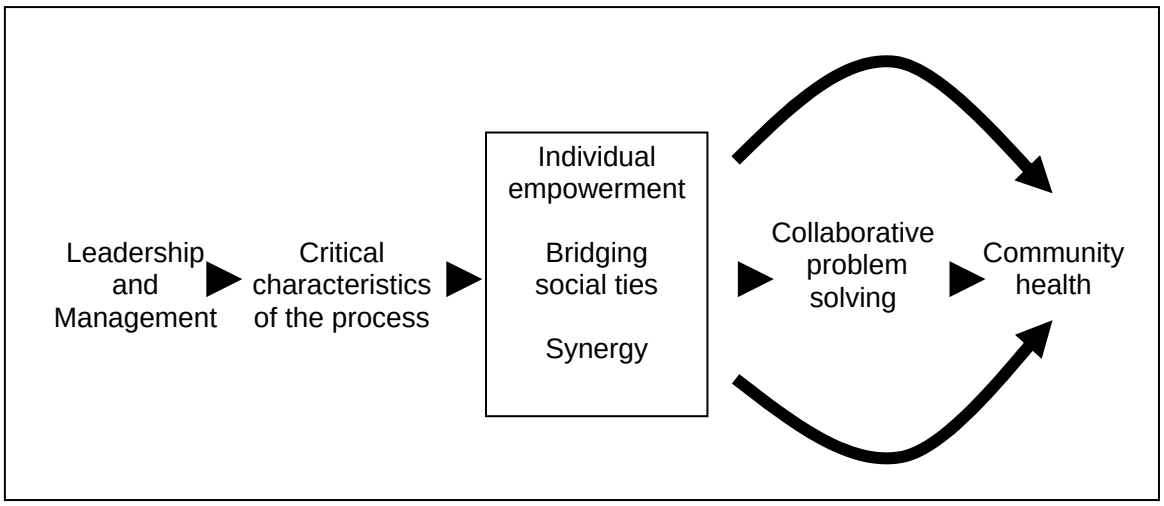

Figure 1: CHG Model (Adapted from the CHG model – Lasker and Weiss 2001)

Based on the CHG model, leadership and management and several critical characteristics of the collaborative process affect the later theoretical constructs. They *empower individual members* of the collaborative process by actively involving them in the decision making process, *bridge social ties* by establishing close relationships between people and organizations, which facilitates the sharing of resources and knowledge and create *synergy* by combining the knowledge of different people which produces creative solutions to complex problems.

Individual empowerment is an outcome of the collaborative process defined as the ability of participating coalition members to make decisions and have control and influence over the direction of health activities (McMillan, Florin et al. 1995; Lasker and Weiss 2003). The CHG model considers *individual empowerment* as a fundamental factor in the process of enhancing the competence of communities to solve complex health problems.

Bridging social ties is a process that facilitates the involvement of community stakeholders in health problem solving and a process which enhances the capacity of coalitions to solve complex health problems (Chavis 1995; Lasker and Weiss 2003) Similar to the CHG's recognition of the role of diversity among coalition participants the Internal Coalition Outcome Hierarchy (ICOH) emphasizes the importance of community participation in coalition in order to accomplish efficient use of resources, sharing of knowledge and the establishment of new relationships (Cramer, Atwood et al. 2006).

The ICOH which is organized into three levels, uses 7 main constructs to explain the different processes and activities of coalitions. The first level of the ICOH utilizes the concepts of Resources, Activities and Participation as constructs aimed at coalition process evaluation. The second level is geared toward coalition outcomes measured through the construct of Relationships, Knowledge/Training and Efficient Practices and the final level is concerned with impact measured through the operationalization of the shared social vision concept

Synergy is conceptualized as the advance in the comprehension of complex health issues as a result of collaborative processes. The appropriate combination of expertise, information and resources from disparate stakeholders results in creative solutions to health issues (Lasker and Weiss 2003).(p.351)

"Synergy can strengthen community problem solving by promoting a special kind of consensus or collective purpose." (Lasker and Weiss 2003)(p.351)

Critical characteristics of the process are coalition characteristics which include geographical, racial and organizational representation as well as the possibility of all coalition members to actively participate and be heard in coalitions (Lasker, Weiss et al. 2001).

Leadership and management influence the success of community collaboration by determining who is involved in the process, how participants are involved, and the scope of the process. Lasker and Weiss refer to the empirical work on leadership of Weiss et al. 2002 and Chrislip et al. 1994 when emphasizing that certain aspects of management, such as leaders and staff that believe in diversity as a means of problem solving, leaders that share control, and consider others as peers, have been shown to be correlated closely with the ability of collaborations to create synergy and to solve community-level problems. (Lasker and Weiss 2003)

According to CHG model, leaders and managers need to establish new relationship, to identify and engage new and diverse participants (Lasker, Weiss et al. 2001) hold meetings at convenient places, provide transportation and child care, serve meals and refreshments and encourage organizational partners to make participation part of their representative job description (Lasker, Weiss et al. 2001).

2.4. COMPREHENSIVE CANCER CONTROL

Comprehensive Cancer Control (CCC) has been defined as a comprehensive approach aimed at reducing cancer incidence, morbidity, and mortality through integrated and coordinated prevention, early detection, treatment and rehabilitation (Given, Black et al. 2005; Rochester, Chapel et al. 2005; True, Kean et al. 2005). This approach, designed by the Centers for Disease Control and Prevention (CDC), its affiliated institutions and other stakeholders, is an integrated approach to planning and coordination of cancer prevention and control programs. It is the aim of the CCC to reduce health disparities, improve the health status of the entire population, reduce

cancer mortality and morbidity and increase the quality of life by assuring that the full spectrum of cancer prevention and control needs are met (Given, Black et al. 2005).

The National Center for Chronic Disease and Prevention, part of CDC, through the Division of Cancer Prevention and Control (DCPC) encouraged the establishment of the CCC approach to cancer prevention and control based on the integration and coordination of different cancer control and prevention programs (Abed, Reilley et al. 2000). The DCPC brought together federal and state health agencies, academic organizations, organizations from the private sector, advocacy groups and national health agencies in order to establish the CCC approach (Abed, Reilley et al. 2000). The DCPC was instrumental in facilitating nationwide cancer prevention programs and it collaborated with State Health Agencies in the establishment of state level CCC programs.

Factors such as inadequate infrastructure and resources and issues such as health and cancer burden disparities as the driving forces behind CDC's establishment of the CCC approach (Given, Black et al. 2005). This approach emphasizes cooperation and collaboration among stakeholders from different fields or research and practices such as research, evaluation, health education, program development, public policy, clinical services and other key stakeholders in order to maximize limited resources and to reduce unnecessary duplication of services and efforts (Given, Black et al. 2005).

As a means of reducing cancer morbidity, mortality, decreasing health disparities and increasing the quality of life, the CCC utilizes three essential factors; the interconnected organization environment, the benefit of collaborative synergy and the practical factors for successful planning, implementation and evaluation of CCC (Abed, Reilley et al. 2000; Given, Black et al. 2005).

2.4.1. Organizational Environment

Many programs that aim at preventing specific cancer risk factors do not collaborate with other cancer programs that address other cancer risk factors. Often such programs operate within the same health agency, and a coordinated approach to address the wider scope of cancer issues is lacking. It is the goal of the CCC to increase the integration of these specific cancer programs with other cancer control program. Through this integration of programs involved in cancer prevention and control, the unnecessary duplication of services and efforts will be reduced; and will result in improvements in the delivery of existing programs at the state and community level (Abed, Reilley et al. 2000; Abed, Reilley et al. 2000). The CCC specifically aims to accomplish collective public health benefits through the application of information and knowledge from specific cancer prevention and control programs and establish best practices (True, Kean et al. 2005). Given that no single organization or agency has the capacity to address all cancer control needs within a state, partnership among cancer prevention and control programs will generate collective empowerment regarding cancer issues.

2.4.2. The Ecological Approach and Synergy

The CCC approach reflects the belief that cancer control and prevention programs should cover the whole spectrum of cancer issues. The comprehensive approach considers that cancer prevention programs must address screening programs and cancer treatment programs at the community and state level (Abed, Reilley et al. 2000; Given, Black et al. 2005). The approach also considers that cooperation and partnership among different stakeholders and disciplines is

key to efficient utilization of limited resources and important in reducing the unnecessary duplication of services and efforts (Given, Black et al. 2005; Rochester, Chapel et al. 2005). The CCC partnerships have focused efforts in bridging existing gaps of fragmented organizational environments, adding value to partnerships through synergy and close racial and ethnic disparities in regard to cancer (Given, Black et al. 2005).

Through synergy, comprehensive perspectives will be developed, evidence-based interventions which incorporate different programs and stakeholders will be implemented, and the gaps in cancer care, cancer prevention and control will be less difficult to be identified. Also as a result of this synergy, new resources can be identified and program efficiency can be increased (Given, Black et al. 2005).

2.4.3. Wide Stakeholder Participation

The CCC brings together experts from different fields, interested groups and individuals such as cancer survivors, private and nonprofit organization and encourages these stakeholders to review the needs and capacities of their community or state concerning cancer control and prevention and evaluate this cancer experience (Given, Black et al. 2005; Rochester, Chapel et al. 2005; True, Kean et al. 2005). Through this close partnership the CCC seeks to identify key areas in need of improvement, establish collaborative approached to cancer control and prevention, and address needed changes (individual or organizational) to meet the needs of the population. Through collaboration, the CCC will combine resources and knowledge and reach maximal positive outcomes (True, Kean et al. 2005).

True et al. (2005) point out the achievements in addressing specific cancer issues such as tobacco control, breast and cervical cancer screening, childhood cancer treatments and consider that CCC will ensure that cancer surveillance data are used in decision making, that cancer research is supported and that effective education and other interventions strategies are implemented.(True, Kean et al. 2005)

The main concerns of the CCC approach are analogous to the concerns and aims of coalitions. The CCC is a framework which organizes the efforts of the Pennsylvania Cancer Control Consortium, a coalition concerned with addressing issues of cancer at the state level. Given this similarity, current theories of coalition building, functioning and efficiency apply to the CCC approach.

2.5. PENNSYLVANIA CANCER CONTROL CONSORTIUM PAC3

The PAC3 was established in 2001 and consists of organizations working voluntarily together to reduce the burden of cancer in Pennsylvania. The PAC3 includes public, private and volunteer organizations across the state that are working together to achieve cancer control priorities (PAC3 2006). Pennsylvania is among the states that have received support from the CDC in building coordinated and focused cancer control programs, and as a result the Pennsylvania Cancer Control Consortium (PAC3) was established.

In 2003, PAC3 and the Pennsylvania Department of Health (PADOH) released the Pennsylvania Comprehensive Cancer Control Plan and as a result the PAC3 formed Implementation Teams to execute cancer control and prevention strategies as identified by the PA Comprehensive Cancer Control Plan. The plan was produced through the work of multiple

stakeholders from across the state that lasted more than one year. These strategies included actions regarding cancer prevention, screening and early cancer detection, health care delivery, health care access and cancer treatment and actions to improve quality of life of cancer survivors (PAC3 2006).

Six building blocks developed by the CDC in its Comprehensive Cancer Control initiative have guided PAC3 in its organizational activities. These building blocks include the assessment and the addressing of cancer burden at the state level, the enhancement of infrastructure, mobilization of support, the utilization of research findings in cancer control and prevention, building partnerships and also the institutionalization of the CCC initiative. In 2006, as PAC3 advanced to their implementation stage, the PAC3 evaluation team began using the CHG model to guide their evaluation efforts.

Based on these building blocks of the CCC approach the PAC3 aims to improve the health of the citizens of Pennsylvania through organized and coordinated cooperation among cancer control and prevention stakeholders, to reduce the human and economic burden of cancer for all citizens of the commonwealth of Pennsylvania. It also intends to ensure that research-based knowledge and understanding of the causes of cancer and its progression will help to develop and implement prevention, early detection, treatment and quality of life programs that are evidence-based (PAC3 2006).

PAC3 has established five implementation teams, in order to facilitate the process of Comprehensive Cancer Control. The teams are responsible for setting the priorities and action plans which are based on the Pennsylvania Comprehensive Cancer Control plan (PAC3 2006). PAC3 members communicate with each other using various means such as face-to-face meetings, video teleconferences, conference calls and through e-mails. The teams have met by

conference calls and six face-to-face meetings from December 2004 to May 2006. Most meetings take place in Harrisburg, PA.

2.5.1. Prevention and Healthy Lifestyles (PHLS)

The role of the prevention and healthy lifestyles implementation team is to promote nutrition and physical activity through increased awareness of the resulting positive health effects. This implementation team also seeks to reach prioritized populations in an attempt to improve tobacco control, support existing tobacco control programs and reduce tobacco pollution.

2.5.2. Early Detection and Screening (EDS)

The prime objective of the early detection and screening implementation team is the promotion of screening services through the use of proven methods of cancer screening. The EDS team seeks to increase the utilization of screening services, increase the communication between patients and providers concerning screening and close the gaps in screening awareness and knowledge. The current focus of EDS is colorectal cancer.

2.5.3. Treatment and Care Delivery (TCD)

The treatment and care delivery implementation team is actively involved in the promotion of improvements in quality of care. This team promotes treatment practices shown to

be successful and seeks to eliminate obstacles to receiving cancer-related care and services. The TCD team is also involved in creating a database with information on treatment and care delivery and also it is concerned with the access to oral chemotherapy to Medicare populations. Their main focus currently is colorectal cancer.

2.5.4. Quality of Life and Survivorship (QOL)

The quality of life and survivorship team is charged with identifying suitable quality of life instruments for persons with cancer, develop a collection of such instruments and establish plans on their use in settings such as outpatient clinics or hospitals.

2.5.5. Research (RES)

The final implementation team, Research, is concerned with improving information dissemination on differences in cancer burden and with research on cancer risk, health behaviors and interventions. The RES team seeks to promote research collaborations and distribute information on best practices and new research needs.

3.0. RESEARCH METHODOLOGY

The study was designed by the PAC3 evaluators, from the Department of Behavioral and Community Health Sciences at the University of Pittsburgh. The study design used the Lasker and Weiss Community Health Governance model as its theoretical framework and in instrument design. Below is a description of methods and measures.

3.1. SURVEY

The instrument used was a 48-item questionnaire, designed by PAC3 evaluation team, using questions from several community capacity surveys, community partnership and other instruments. In an attempt to measure constructs of the Community Health Governance model, the final questionnaire was composed of original questions, questions adapted from the Partnership Self-Assessment tool developed by the Division of Public Health and the Center for the Advancement of Collaborative Strategies in Health at the New York academy of Medicine, headed by Dr. Roz D. Lasker (Lasker 2006). Several other aspects of the questionnaire were adapted from the Community Partnership Program Fighting Back Committee Survey developed by Butterfoss, Goodman and Wandersman (Goodman 1998).

Most questions were close-ended and used Likert scales. The focus of the questionnaire was on functioning of PAC3 as a unit and functioning of Implementation Teams.

3.2. MEASURES

Questions addressed some general characteristics of respondents (race/ethnicity, county of residence) as well as each of the concepts of the theoretical model. The questionnaire can be found on Appendix A.

In an attempt to measure how well our set of variables are measuring our constructs derived from the CHG model. I used Cronbach's alpha to assess inter-item correlation between the variables within each construct. The independent variables were Leadership, Management and Critical characteristics of the process.

Leadership: Leadership as an independent variable (α = .79) was measured by four items on Leadership communication of vision, fostering respect, recruit diverse people and organizations, coordinate communication among people and organizations (in and outside PAC3 membership), organize membership activities and communicate PAC3's vision to the members. Each item was a 5-point Likert-type scale with 1 = excellent and 5 = poor.

Management: The independent variable of Management (α = .77) was measured by 5 items (Partnership Self-Assessment) reworded to apply to our sample. The items measured the following characteristics: Coordinating communication among members and with other people and organizations outside the membership; organizing membership activities such as meetings, summits and forums; applying for and managing funds, and preparing materials for members. Each item was measured on a 5-point Likert-type scale with 1 = excellent and 5 = poor.

Critical Characteristics of the process: The final independent variable, Critical Characteristics of the Process (α = .71) was measured by four items which measured members attitude on opportunities to participate in PAC3 and their attitude towards PAC3's strive to promote

geographical, racial/ethnic and organizational representation. Items were measured on a 5-point Likert-type scale ranging from 1 = strongly agree to 5 = strongly disagree.

Three dependent variables measured by the survey included Empowerment, Synergy and Bridging Social Ties.

Empowerment was measured by 7 items; 5 items measured members experience and feelings towards PAC3 (α = .604) where they were asked to rate their experienced ability to have a greater impact working together than alone, and rate their fulfillment of their sense of responsibility and 2 items measured the members experience regarding time contributions (α = .82). Items were measured on a 5-point Likert-type scale ranging from 1 = strongly agree to 5 = strongly disagree.

Bridging social ties (α = .747)**,** was measured using 2 items which asked PAC3 members to rate the extent they developed valuable relationships, and increased cooperation with members from other organizations. Items were measured on a 5-point Likert-type scale ranging from 1 = strongly agree to 5 = strongly disagree.

Synergy: The final dependent variable, Synergy (α = .755) was measured using 5 items, where 2 of them measured member attitude on problem solving and goal development and other items asked members to rate the extent they feel able to accomplish more working together than working separately, and the extent they are able to identify services and programs related to their interest. Items were measured on a 5-point Likert-type scale ranging from 1 = strongly agree to 5 = strongly disagree.

3.3. PARTICIPANTS

All consortium members (753) received the survey electronically, followed by three electronic and one postal reminder. (As per PA Department of Health requirements, it was necessary to survey all members instead of sending the questionnaire to a representative sample of consortium members). The survey was accompanied by a short introductory letter and an informed consent script (Appendix B). Survey responses were confidential. This study was approved by the University of Pittsburgh IRB # 0606041

3.4. DATA MANAGEMENT AND ANALYSIS

Data were entered into SPSS. Frequencies and cross-tabulations were run. Variables were dichotomized. Responses to 5-level questions were collapsed into 2 levels before frequencies were tabulated. Responses of excellent and very good to Leadership questions became "positive". Responses to good, fair and poor became new level "not positive". Responses to strongly agree and agree became new level "agree" and responses to neither agree nor disagree, disagree and strongly disagree became new level "disagree".

Bivariate relationships among variables were tested using Chi-square tests of independence at a 95% confidence level. Because Chi Square tests require that at least 5 responses exist in each cell of a 2x2 table, we aggregated the responses in order to calculate the Chi square test of independence. Variables that failed to discriminate (more than 90% responded in the same category) were eliminated from further statistical analysis because the expected cell count was below the required number (below 5).

4.0. RESULTS

4.1. RESPONSE RATE

A total of 162 responses were received (response rate = 21.6%). The study's response rate has been affected by several factors, including sampling frame, survey method and technical difficulties.

4.2. DEMOGRAPHIC COMPARISONS

There were a total of 162 survey responses included in the analyses. Figure 1 presents comparisons of geographical representation of survey respondents and PAC3 members. The four counties that have the highest number of responses to the survey (Philadelphia, Allegheny, Erie and Dauphin) are also the four counties that contribute the most members to the consortium.

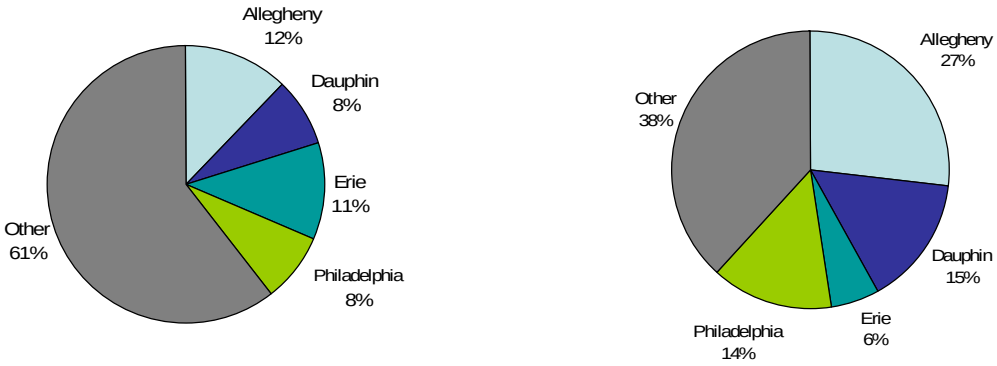

Figure 2: PAC3 Counties represented by members vs. survey respondents

When comparing the proportion of survey respondents involved in Implementation Teams, we see they form the majority of survey respondents. Results show that 63.6% of survey respondents

belonged to an implementation team, in contrast to 35.9% of members who were not part of implementation teams.

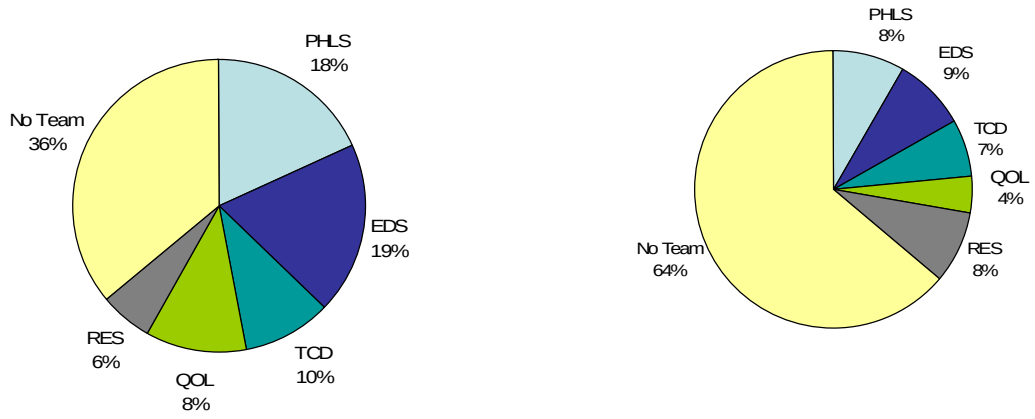

Figure 3: PAC3 Survey responses by Implementation team membership and Implementation team members in PAC3.

In the PAC3 survey, 48 (31.5%) respondents indicated that they represented hospital-based health organizations, 45 (29.6%) represented community-based health organizations and 9 (5.9%) respondents indicated representation of grassroots organizations. Several respondents indicated more than one organizational representation or affiliation (Table1).

Table 1. PAC3 Organizational Representation

Organization	No. (%) (n=152)
Hospital-based health Org.	48 (31.5)
Grassroots	9 (5.9)
Community-based health Org.	45 (29.6)
Business	3 (1.9)
Other	47 (30)
Total	152 (100)

4.3. UNIVARIATE ANALYSIS

In reviewing survey responses I observed that two out of the four Leadership variables, one out of five Management variables and four out of four Critical characteristics of the process variables received over 60% of positive responses. Recruiting diverse people and organizations' (Leadership), 'Coordinating communication with people and organizations outside of the consortium' and 'Applying for and managing funds' (Management) received less than 50% positive responses.

Leadership: In examining the responses to measures of Leadership we found that 103 (64.8%) of respondents consider as effective the leadership's communication of PAC3's mission and 63% believe that the leadership is effective in fostering respect, trust and openness in the organization. I found that variables measuring the Leaderships efficacy in combining perspectives, resources and skills of members and recruiting diverse people and organizations received lower positive responses, 54.5% and 45.4 % respectively. Frequencies of aggregate positive responses to survey questions on Leadership, Management and Critical characteristics of the process are displayed in Table 1.

Management: Measures of management effectiveness showed somewhat lower positive responses than measures of Leadership. Two out of 5 measures of measurement, coordinating communication with people and organizations outside PAC3 membership and applying for and managing grants, received high negative responses (66.9% and 53.2% respectively). Sixty seven percent of survey respondents were satisfied with the organization of membership activities (meetings, summits and forums) and just over half (56.5%) responded positively to questions of coordination of communication among members.

Critical Characteristics of the Process: Responses to measures of critical characteristics of the process (opportunity to participate, geographical representation, racial/ethnic representation and the promotion of organizational representation) were overall positive. Eighty percent of survey respondents believe that there is an opportunity for all PAC3 members to participated, and 79.4% and 68.7% believe that PAC3 promotes geographical representation and racial/ethnic representation, respectively.

Empowerment: Two out of five Empowerment variables, two out of two variables of Bridging social ties and four out of four variables measuring Synergy received over 60% positive responses. 'Supporting my organization's concerns and mission' received under 50% of positive responses. These measures showed some variation in responses, where 57.6% of respondents agreed that they have experienced the ability to have a greater impact than they could have on their own, and 68.2% believe that they support their organization's mission by participating in PAC3. Other measures of empowerment indicate that only 52.3% of respondents believe that they fulfilled their end of responsibility to contribute to the state, and 75.2% responded that they feel no frustration or aggravation as a result of PAC3 participation (Table 2).

Bridging Social Ties: In measures of bridging social ties, 68% of survey respondents agreed that as a result of PAC3, they developed valuable relationships and 60.4% declared that PAC3 participation increased their cooperation with members of other state agencies and groups.

Synergy responses to these questions provided less variation than measures of other concepts, given the strong agreement with the proposed statements. Responses to questions of synergy show that 92% or respondents believe that as a result of participation in PAC3, they can accomplish more than they could accomplish working separately, and 83.7% believe that they are able to identify new and creative ways to solve problems due to PAC3 participation. High

agreement continues with statements that they are able to develop goals that are widely understood and supported among members and that they are able to identify different services, where the responses are 85.8% and 83.4% agreement respectively.

Table 2. Frequency of Aggregate Positive Responses to Survey Questions on Characteristics of Coalition Building

Variables	**No. (%) (n=162)**
Leadership	
Communicating the vision of the organization	103 (64.8)
Fostering respect, trust, inclusiveness and openness in the organization	99 (63.5)
Combining the perspectives, resources and skills of members	85 (54.5)
Recruiting diverse people and organizations into PAC3	69 (45.4)
Management	
Coordinating communication among members	87 (56.5)
Coordinating communication with people and organizations out/membership	40 (33.1)
Organizing membership activities, including meetings, summits and forums	106 (67.9)
Applying for and managing grants and funds	51 (46.8)
Preparing materials that inform members and help them make timely decisions	81 (53.3)
Critical Characteristics of the Process	
In the PAC3 there is an opportunity for all members to participate	127 (80.9)
PAC3 strives to promote geographical representation	108 (79.4)
PAC3 strives to promote racial/ethnic representation	92 (68.7)
PAC3 strives to promote organizational representation	110 (71.9)

Ordinal response items used a (5) point scale. For measures of Leadership and Management, "Positive" refers to items marked Excellent and Very Good and for other variables "Positive" refers to items marked Strongly Agree and Agree.

Table 3. Frequency of Aggregate Positive Responses to Survey Questions on Characteristics of Coalition Building Synergy, Social Ties and Individual Empowerment)

Variables	No. (%) (n=162)
Individual Empowerment	
Experienced the ability to have a greater impact that I could have on my own	87 (57.6)
Supported my organization's concerns and mission	38 (24.8)
Fulfilled my sense of responsibility to contribute to the community	79 (52.3)
As a results of PAC3 membership, I have experienced frustration or aggravation	38 (24.8)
Acquired useful knowledge about services, programs or people in the state	110 (71.9)
Bridging social ties	
Developed valuable relationships	104 (68.0)
Increased my cooperating with members of other community agencies/groups	93 (60.4)
Synergy	
Can accomplish more than they could accomplish working separately	138 (92.0)
Are able to identify new and creative ways to solve problems	123 (83.7)
Are able to develop goals that are widely understood and supported among members	127 (85.8)
Are able to identify how different services and programs in the community relate to the problems the consortium is trying to address	121 (83.4)

Ordinal response items used a (5) point scale. For measures of Leadership and Management, "Positive" refers to items marked Excellent and Very Good and for other variables "Positive" refers to items marked Strongly Agree and Agree.

4.4. BIVARIATE ANALYSIS

Using the responses to the PAC3 survey, I compared the association between variables measuring Leadership, Management, Critical Characteristics of the Process with variables measuring member Empowerment, Synergy and Social ties. Tables 3 and 4 present the p values of X2 test of independence among these variables.

According to the CHG model, the variables of Empowerment, Synergy and Bridging Social Ties should be associated and should be affected by leadership, management and critical characteristics of the process.

4.4.1. Empowerment

Almost all variables measuring the concept of Leadership showed a statistically significant association with the four measures of Empowerment ($p<0.05$). The only exception was the lack of association between 'Combining perspectives, resources and skills of members' (Leadership) and 'Fulfilled my sense of responsibility to the community' (Empowerment).

Three of the five variables measuring the concept of Management showed a statistically significant association with the four measures of Empowerment ($p<0.05$). The Management measures 'Coordinating communication with people and organizations outside of the membership' and 'Applying for and managing funds were less consistently associated with measures of Empowerment.

Almost all variables measuring the Critical characteristics of the process showed a statistically significant association with the four measures of Empowerment ($p<0.05$). The only exception was the lack of association between 'PAC3 strives to promote geographical

representation' (Process) and 'Fulfilled my sense of responsibility to the community' (Empowerment).

4.4.2. Bridging Social Ties

Almost all variables measuring the concept of Leadership showed a statistically significant association with the two measures of Bridging social ties ($p<0.05$). The only exception was the lack of association between 'Recruiting diverse people and organizations into PAC3' (Leadership) and 'Developed valuable relationships' (Bridging Social Ties).

Two of the five variables measuring the concept of Management showed a statistically significant association with the two measures of Bridging social ties ($p<0.05$). These Management variables are 'Coordinating communication among members' and 'Organizing membership activities.' The Management measure 'Coordinating communication with people and organizations outside of the membership' was not significantly associated with any Bridging social ties variable.

Two of the four variables measuring the Critical characteristics of the process showed a statistically significant association with the four measures of Bridging social ties ($p<0.05$). The variables related to ethnic representation showed no association with Bridging social ties.

4.4.3. Synergy

Two out of four variables measuring the concept of Leadership showed a statistically significant association with the five measures of Synergy ($p<0.05$). There was a lack of association between 'Recruiting diverse people and organizations into PAC3' (Leadership) and 'Developed valuable relationships' (Bridging Social Ties).

Two of the five variables measuring the concept of Management showed a statistically significant association with the five measures of Synergy ($p<0.05$). These management variables are 'Coordinating communication among members' and 'preparing materials that inform members and help them make timely decisions.' Management measure 'Coordinating communication with people and organizations outside of the membership' was not significantly associated with any Synergy variable.

One of the four variables measuring the Critical characteristics of the process showed a statistically significant association with the five measures of Synergy ($p<0.05$). The variables related to ethnic representation showed the least association with measures of Synergy.

Table 4. p Values of Chi Square Test of Independence of Leadership Management and Measures of Critical Characteristics of the Process with Measures of Synergy

Variables	Can accomplish more than they could accomplish working separately	Are able to identify new and creative ways to solve problems	Are able to develop goals that are widely understood and supported among members	Are able to identify how different services and programs in the community relate to the problems the consortium is trying to address	Are able to respond to the needs and problems of the community
Leadership					
Communicating the vision of the organization	0.072	0.150	0.008	0.002	0.082
Fostering respect, trust, inclusiveness and openness in the organization	0.162	0.002	0.000	0.000	0.000
Combining the perspectives, resources and skills of members	0.027	0.004	0.001	0.000	0.001
Recruiting diverse people and organizations into PAC3	0.013	0.046	0.101	0.001	0.001
Management					
Coordinating communication among members	0.012	0.000	0.000	0.001	0.034
Coordinating communication with people ad organizations out/membership	0.449	0.413	0.398	0.132	0.128
Organizing membership activities, including meetings, summits and forums	0.076	0.032	0.004	0.029	0.010
Applying for and managing grants and funds	0.132	0.282	0.059	0.031	0.020
Preparing materials that inform members and help them make timely decisions	0.017	0.047	0.007	0.042	0.028
Critical Characteristics of the Process					
In the PAC3, there is an opportunity for all members to participate	0.041	0.000	0.000	0.000	0.001
PAC3 strives to promote geographical representation	0.693	0.017	0.033	0.175	0.370
PAC3 strives to promote racial/ethnic representation	0.900	0.052	0.068	0.017	0.011
PAC3 strives to promote organizational representation	0.142	0.000	0.000	0.000	0.000

Table 5. p values of Chi Square Test of Independence relating Measures of Leadership Management and Critical Characteristics of the Process with Measures of Empowerment and Social Ties

Variables	Experienced the ability to have a greater impact that I could have on my own	Supported my organization's concerns and mission	Fulfilled my sense of responsibility to contribute to the community	As a results of PAC3 membership, I have experienced frustration	Acquired useful knowledge about services, programs or people in the state	Developed valuable relationships	Increased my cooperating with members of other community agencies/groups
Leadership							
Communicating the vision of the organization	0.000	0.001	0.000	0.000	0.000	0.007	0.022
Fostering respect, trust, inclusiveness and openness in the organization	0.000	0.000	0.001	0.000	0.000	0.001	0.001
Combining the perspectives, resources and skills of members	0.000	0.000	0.076	0.001	0.000	0.006	0.041
Recruiting diverse people and organizations into PAC3	0.012	0.002	0.019	0.005	0.001	0.256	0.060
Management							
Coordinating communication among members	0.000	0.000	0.031	0.002	0.000	0.032	0.004
Coordinating communication with people ad organizations out/membership	0.034	0.077	0.080	0.027	0.055	0.723	0.049
Organizing membership activities, including meetings, summits and forums	0.000	0.000	0.000	0.002	0.000	0.000	0.000
Applying for and managing grants and funds	0.037	0.656	0.490	0.064	0.001	0.294	0.311
Preparing materials that inform members and help them make timely decisions	0.012	0.020	0.017	0.001	0.000	0.078	0.004
Critical Characteristics of the Process							
In the PAC3, there is an opportunity for all members to participate	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PAC3 strives to promote geographical representation	0.001	0.003	0.163	0.046	0.044	0.000	0.031
PAC3 strives to promote racial/ethnic representation	0.002	0.015	0.214	0.002	0.124	0.070	0.196

5.0. DISCUSSION

Research on coalition functioning and effectiveness have consistently focused on a specific number of concepts as indicators of coalition effectives (Kegler, Steckler et al. 1998; Zakocs and Guckenburg 2006). Leadership, social networks, empowerment, synergy and participation have been among the selected variables used as indicators of coalition effectiveness and functioning (Goodman, Speers et al. 1998; Kegler, Steckler et al. 1998; Kegler, Steckler et al. 1998; Lasker and Weiss 2003; Lempa, Goodman et al. 2006). The Community Health Governance Model also emphasizes the importance of the aforementioned characteristics of coalition effectiveness and functioning. Using the concepts of the Community Health Governance Model, I examined the association between these community effectiveness characteristics which were measured using a 48 – item survey.

Study analysis yielded information on the associations of various aspects of the coalition process. The most significant relationship was among the measures of leadership and variables of empowerment, social ties and synergy. Studies have confirmed the importance of leadership in coalition building, coalition initiation and community capacity (Lempa, Goodman et al. 2006; Zakocs and Edwards 2006; Zakocs and Guckenburg 2006).

Based on the Community Health Governance Model, member empowerment, establishment of social ties and networks and synergy are vital characteristics of the coalition development process. This theory provides a model to understand the functioning of this coalition and provides and interpretation of the aspects of the PAC3 coalition to be addressed. Based on the model, these characteristics are influenced by coalition leadership, management and membership representation. The study results seem to follow this pattern of influence.

Given the importance placed on leadership by coalition members, it is sensible to promote the establishment, maintenance and development of good leadership with coalitions such as PAC3. In our study, members who did not actively participate in their committees were usually the most disillusioned about the partnership's progress and less likely to be satisfied, therefore it is important to promote participation and involvement as a means of increasing coalition satisfaction. The study results support initiatives aimed at strengthening coalition leadership by increasing direct collaboration between leaders and other members, sharing the missions and objectives of the collaboration with members, increasing communication with members, and hearing the perspective of coalition members.

Study results showed a surprisingly low association between measures of management and member empowerment, synergy and social ties. Understanding the complex interaction of leadership and management, where leadership is crucial for developing good management strategies and at the same time management is vital in developing good leadership. According to this study, leadership characteristics are seen as the leading factors of coalition functioning and effectiveness. Studies have shown that managerial tasks within coalitions and organizations are important to coalition and organization effectives, however the correlation to coalition effectiveness is lower compared to measures of leadership (Zakocs and Guckenburg 2006). It has been pointed out that organizations and coalitions that maintained a separate coordination office, such as the PAC3 coordinating office, or a steering committee in addition to the board of directors unit are more likely to be functional and effective coalitions (Zakocs and Guckenburg 2006). Management efforts to coordinate communication with people and organizations outside of the current PAC3 membership were shown not to be associated with member's development of valuable relationships; however it was shown to be associated to member's feelings of

empowerment. This dynamic relationship between variables provides insight into potential areas of improvement within the existing PAC3 coalition, and can be used as a guide in establishing and maintaining other coalitions or organizational functioning.

Highlighting the importance of membership empowerment, members feel that geographical representation, racial and ethnic representation as well as participation opportunities are factors associated with their feelings of empowerment. These results hold important implications for the current PAC3 coalition, given the importance placed on geographical and racial representation by the members.

While the PAC3 has been successful in attracting membership from various academic institutions and professional organizations such as hospitals and other branches of health care, the representation of community members, grassroots organizations has limited synergy and has shifted the balance of the decision making process (Butterfoss, Goodman et al. 1996). In order to promote critical problem solving a wider spectrum of member must be represented, with special considerations for inclusion of community members such as cancer survivors and family members, and organizations concerned with health care access and will the rights of cancer patients such as grassroots organizations.

Overall, all characteristics of coalition membership and activities must have proportional representation from all ethnic and minority groups, given the democratic nature of coalitions. PAC3 has attempted to reach out to minority populations in Pennsylvania in order to have a better ethnic and racial representation. Given the complexity and intricateness of the outreach process, PAC3 membership did not proportionally represent ethnic and racial communities in Pennsylvania. However, geographically, survey respondents represent consortium members. The

vast majority of respondents are Caucasian. Exact race/ethnicity breakdown for PAC3 is not available.

The CHG model stresses the importance of specific leadership responsibilities related to coalition building such as suitable meeting places and times, transportation and childcare. Based on these criteria, PAC3 membership did not represent several counties and communities from Pennsylvania and geographical location of meetings was an important factor in determining this representation.

This study should be understood within the limitations of the methodology. This study used a case study approach, which presents limitations to the study's generalizability. It would be interesting in conducting a meta-analysis of studies with similar methods and models as a way of comparing the same concepts in a larger sample.

Selection bias is another issue relevant to our study, given that the survey shows a higher representation of implementation team members versus general consortium members. If implementation team members are systematically different, in their perception of PAC3, from members that do not participate in implementation teams, which could present bias on study results (Im and Chee 2004).

Sampling frame was an issue with our study since it was the aim of the study to reach all PAC3 members. However we relied on conference participant email addresses for contact information and considered conference participation as indication of PAC3 membership. Because there was no system in place to assess participant's membership status, we contacted all persons for whom contact information was provided. We are aware that the actual number of active PAC3 members is less than 753, the number of surveys sent. The second factor to the response rate was the survey method, which is a online survey invitation sent via email. Web

based surveys and factors associated with response rate are discussed later. The third factor associated with the study's response rate were technical difficulties at the PAC3 coordination office. Because of the lack of human resources follow up mail surveys were not sent to PAC3 members.

During the past years, research has been taking advantage of the developments in the field of technology, in order to facilitate research processes. The internet has been among the technologies utilized by science and research. Research studies, which utilize surveys as their prime method of data gathering, have increased their internet use for study participant recruitment and survey dissemination. While using the internet presents many benefits to the research community, such as low costs of disseminating surveys and the easiness of sending questionnaires to participants, its use has also presented some problems. Selection bias, low response rates and lack of motivating methods have been identified by researchers as the main issues with internet based surveys (Braithwaite, Emery et al. 2003; Im and Chee 2004).

Among these issues, low response rate is the most germane to our study. Literature review of studies using internet based surveys has shown that the typical range of response rates lies between two and 10 % (Braithwaite, Emery et al. 2003; Im and Chee 2004). It has been noted that problems associated with the dissemination process of the surveys, such as its resemblance to spam mail, are among the reasons for the low response to the survey. Studies have also shown that response rates on internet based surveys was associated with seasons and holidays, given that a higher number of people have internet access from their workplace than home (Im and Chee 2004).

I disseminated this survey during the summer months (July), and literature has identified the end of August and September among the months with the highest response rate.

In the study, the population used consisted of PAC3 members. PAC3 membership was assessed only with initial sign in sheets. There was no separate process of distinguishing interested persons from active members, such as membership confirmation or re-sign in.

Among the actions recommended by literature review of internet surveys to increase the response rate are follow-up phone calls. Due to budgetary constraints, we did not conduct such follow up.

6.0. CONCLUSIONS AND RECOMMENDATIONS

PAC3 has achieved proximal outcomes (Empowerment of individual members, Bridging social ties, and Synergy) to a moderate extent. PAC3 has developed greatly the Critical characteristics of the process. They could be further improved by strengthening Leadership and Management as PAC3 matures as an organization. Geographical and ethnic representation are among the areas on which PAC3 should focus.

In PAC3, Empowerment of individual members, Bridging social ties, and Synergy are determined, as predicted by the theoretical framework, by Leadership and Critical characteristics of the process, and to a lesser extent by Management. According to this study results, the coalition must emphasize leadership given its relationship to member empowerment, and their ability to facilitate the bridging of social ties.

PAC3 should continue its path of development and maturation with emphasis on membership inclusion in this development process.

APPENDIX A

PAC3 MEMBER STATISFACTION SURVEY

PAC³ Member Satisfaction Survey - May 2006

This survey has two parts. The first part asks questions about PAC³ in general. The second part asks questions about your Implementation Team (if you have one). Please check only one answer unless otherwise noted.

PART 1 – About PAC³

	Excellent	ery good	Good	Fair	Poor	Don't know
ease rate the total effectiveness of PAC³'s leadership/management in:						
mmunicating PAC³'s vision	1	2	3	4	5	6
stering respect, trust, inclusiveness and openness	1	2	3	4	5	6
mbining the perspectives, resources and skills of members	1	2	3	4	5	6
cruiting diverse people and organizations	1	2	3	4	5	6
ordinating communication among members	1	2	3	4	5	6
ordinating communication with people/organizations outside membership	1	2	3	4	5	6
ganizing membership activities, including meetings, summits, forums	1	2	3	4	5	6
plying for and managing grants and funds	1	2	3	4	5	6
eparing materials that inform members and help them make timely cisions	1	2	3	4	5	6

	Strongly Agree	Agree	either Agree or Disagree	Disagree	Strongly disagree	Don't know
ease indicate how much you agree or disagree with the following:						
PAC³, there is an opportunity for all members to participate	1	2	3	4	5	6
m satisfied with my role in PAC³	1	2	3	4	5	6
C³ demands too much of my personal time	1	2	3	4	5	6
C³ demands too much of my time from agency/organizational mmitments	1	2	3	4	5	6
C³ has advanced the implementation of its priority strategies to an propriate extent	1	2	3	4	5	6
C³ is addressing the goals and objectives of the PA Comprehensive Cancer ntrol Plan to an appropriate extent	1	2	3	4	5	6
general, I am satisfied with the work of PAC³	1	2	3	4	5	6
C³ strives to promote geographical representation	1	2	3	4	5	6
C³ strives to promote racial/ethnic representation	1	2	3	4	5	6
C³ strives to promote organizational representation	1	2	3	4	5	6

	Strongly Agree	Agree	Either Agree or Disagree	Disagree	Strongly disagree	Don't know
Please indicate how much you agree or disagree with the following:						
As a result of my participation in PAC3 I have …						
… acquired useful knowledge about services, programs, or people in the state	1	2	3	4	5	6
… developed valuable relationships	1	2	3	4	5	6
… experienced the ability to have a greater impact than I could have on my own	1	2	3	4	5	6
… increased my cooperation with members of other state agencies/groups	1	2	3	4	5	6
… supported my organization's concerns and mission	1	2	3	4	5	6
… fulfilled my end of responsibility to contribute to the state/community	1	2	3	4	5	6
… experienced frustration/aggravation	1	2	3	4	5	6
By working together, PAC³ members….						
… can accomplish more than they could accomplish working separately	1	2	3	4	5	6
… are able to identify new and creative ways to solve problems	1	2	3	4	5	6
… are able to develop goals that are widely understood and supported among members	1	2	3	4	5	6
… are able to identify how different service and programs in the state and community relate to the problems the consortium is trying to address	1	2	3	4	5	6
… are able to respond to the needs and problems of the state and community	1	2	3	4	5	6

In which county do you reside? _____

Have you attended a PAC³ meeting in the last 12 months? ____ yes _____ no

If yes, what type of meeting? (Check all that apply)

☐ Summit ☐ Research Summit ☐ Implementation Teams Meeting ☐ Regional Forum

Which one of the following best describes your organization?

☐ Hospital-based health organization ☐ Grassroots, advocacy ☐ Community-based health organization ☐ Business

☐ Legislative group ☐ Foundation ☐ Other, Please Specify: _____

How would you describe your race/ethnicity? (Check all that apply)

☐ African American ☐ Asian ☐ American Indian ☐ Alaska Native ☐ Caucasian

☐ Hawaiian/Other Pacific Islander ☐ Hispanic/Latino ☐ Other, Please Specify: _____

PART 2 – About the Implementation Teams

My Implementation Team is: (check one)

☐ Prevention and Healthy Lifestyles (PHLS) ☐ Early Detection/Screening (EDS)

☐ Treatment and Care Delivery (TCD) ☐ Quality of Life/Survivorship (QOL)

☐ Research (RES) ☐ No Team

If you marked "No team," please skip to the last question, "Comments".

What Implementation Teams meetings have you attended in Harrisburg during the last 12 months? (Check all that apply)

☐ May 13, 2005 ☐ September 9, 2005 ☐ December 2, 2006 ☐ February 10, 2006

Have you communicated in other ways with your Implementation Team? (Check all that apply)

☐ Yes, Conference Calls ☐ Email

☐ Yes, Video Teleconferences ☐ Other, Please Specify:

☐ Yes, Face-to-Face Meetings ☐ I have not attended any meeting

	Strongly Agree	Agree	Either Agree or Disagree	Disagree	Strongly disagree	Don't know
Please indicate how much you agree or disagree with the following:						
My Team's co-chairs manage the Team well	1	2	3	4	5	6
My Team's co-chairs know how to resolve conflict	1	2	3	4	5	6
Communication among members of my Implementation Team is clear	1	2	3	4	5	6
Discussion and communication in my Implementation Team is productive	1	2	3	4	5	6
In my Team, there is opportunity for all members to participate in discussions	1	2	3	4	5	6
There is a feeling of unity and cohesion in my Team	1	2	3	4	5	6
My Team has developed an Action Plan that responds to the PA Comprehensive Cancer Control Plan	1	2	3	4	5	6
My Team has developed appropriate priority strategies	1	2	3	4	5	6
My Team has implemented its priority strategies to an appropriate extent	1	2	3	4	5	6

Comments: _____

_____

_____

APPENDIX B

UNIVERSITY OF PITTSBURGH IRB APPROVAL LETTER

University of Pittsburgh
Institutional Review Board

Exempt and Expedited Reviews

University of Pittsburgh FWA: 00006790
University of Pittsburgh Medical Center: FWA 00006735
Children's Hospital of Pittsburgh: FWA 00000600

3500 Fifth Avenue
Suite 100
Pittsburgh, PA 15213
Phone: 412.383.1480
Fax: 412.383.1508

TO: Patricia Documet, M.D.

FROM: Sue R. Beers, Ph.D., Vice Chair

DATE: June 23, 2006

PROTOCOL: Evaluation of the Functioning of the Pennsylvania Cancer Control Consortium (PAC3)

IRB Number: 0606041

The above-referenced protocol has been reviewed by the University of Pittsburgh Institutional Review Board. Based on the information provided in the IRB protocol, this project meets all the necessary criteria for an exemption, and is hereby designated as "exempt" under section 45 CFR 46.101(b)(2).

- If any modifications are made to this project, please submit an 'exempt modification' form to the IRB.
- Please advise the IRB when your project has been completed so that it may be officially terminated in the IRB database.
- This research study may be audited by the University of Pittsburgh Research Conduct and Compliance Office.

Approval Date: June 23, 2006

SRB:kh

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