2019

The Impact of Congressional Attention and Policy Mood on Public Health Funding

Evelyn Denise Dunn
Walden University

Walden University

College of Social and Behavioral Sciences

This is to certify that the doctoral dissertation by

Evelyn Dunn

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Karen Shafer, Committee Chairperson,
Public Policy and Administration Faculty

Dr. Shawn Gillen, Committee Member,
Public Policy and Administration Faculty

Dr. Heather Mbaye, University Reviewer,
Public Policy and Administration Faculty

Chief Academic Officer
Eric Riedel, Ph.D.

Walden University
2019

Abstract

The Impact of Congressional Attention and Policy Mood on Public Health Funding

by

Evelyn Dunn

MPA, Georgia State University, 2006

BS, University of Tennessee, Center for Health Sciences, 1983

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Public Policy and Administration

Walden University

May 2019

Abstract

Congressional appropriations for federal public health agencies are subjected to external factors throughout the congressional appropriations process, resulting in fluctuations in funding. Recent literature has focused on externals factors, such as political attention and public attitudes, that could influence government funding levels; however, the impact of these factors on federal public health funding was not addressed. The purpose of this study was to determine whether a relationship exists between these external factors and federal public health appropriations. A quantitative study was used to examine congressional attention, policy mood, and the influence on the change in the level of federal public health appropriation during fiscal years 1947–2015. The theoretical framework for this study was based on the punctuated equilibrium theory. The population of this study included 68 years of time series data and analyzed using bivariate linear regression to determine the relationship between the independent variables of congressional hearing days and the policy mood scores and the dependent variable of federal public health appropriations. The results of the regression models indicated that congressional hearings days and policy mood scores did not have a statically significant effect on the change in the level of public health appropriations. Policy implications include informing public health officials and advocacy groups targeting public health messages to Congress that focus on increasing resources to targeted programs. Social change implications include informing health officials in planning congressional outreach and appropriations strategies, which can be used to improve the implementation of public health programs benefiting the community and promoting positive social change.

The Impact of Congressional Attention and Policy Mood on Public Health Funding

by

Evelyn Dunn

MPA, Georgia State University, 2006

BS, University of Tennessee, Center for Health Sciences, 1983

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Public Policy and Administration

Walden University

May 2019

Dedication

This dissertation is dedicated to my husband Ken. All the work, struggles and words of inspiration you gave me, while supporting me in fulfilling my dream. Thank you for always being there.

To my son, Richard, thank you for allowing me the time to work towards completing this dissertation. I hope by watching me that you will continue and complete your education through college with focus and perseverance.

To my sister, Thelma, although you are not physically with me as I completed this dissertation, I know that you are with me in spirit.

Acknowledgments

My deepest gratitude to the following people who have supported me along this journey.

Dr. Karen Shafer, for your guidance, encouragement and patience. It was an honor having you as my chair and mentor throughout this process.

Dr. Shawn Gillen, for your continued support through guidance and scholarly input. I was privileged to have you on my dissertation committee.

My dissertation buddy, Tracy Clopton, for the supportive check-ins and work-time lunches giving me the encouragement to continue this journey.

Table of Contents

List of Tables

Chapter 1: Introduction to the Study

Introduction

The objective of this quantitative study was to apply policy punctuation theory to explain budgetary and policy changes within the public health funding system. In the context of examining external factors influencing government spending, I addressed the impact of congressional attention and policy mood on federal public health appropriations in this study. The need for understanding public health spending was vital to assess the resources needed to deliver the core essential public health services at state and local health departments (Leider, Sellers, Shah, Pearsol, & Jarris, 2012; Livingood, Morris, Sorensen, Chapman, & Rivera, 2013). Furthermore, research has indicated a relationship between levels of public health spending and health outcomes within communities and the need for more public health funding research (Bernet, 2012; Bradley et al., 2016; Marton, Sung, & Honore, 2015; Mays & Smith 2011) Globally, per capita, public health spending remains insufficient to support necessary public health outcomes in many countries (Martin & Streams, 2015).

The study included federal funding that supports the U.S. Public Health Services Agencies (USPHSA) within the U.S. Department of Health and Human Services. Collectively, these agencies provide the funding and support for the essential public health services in the United States. The results of this study added to the policy punctuation literature on external factors that could influence the level of changes in public health appropriation. By examining federal public health spending level changes in

this study, I offered the extent that congressional attention and policy mood influence punctuations in funding levels during extended periods of stability.

The research of congressional attention and policy mood on federal public health funding has implications for social change within the public health financing system. Public health officials are charged with making budgetary decisions impacting the delivery of essential public health services resulting in significant health outcomes. Public health policy decision-makers and organizations supporting public health programs could find this information beneficial during strict fiscal periods when allocating resources to target public health messages. Obtaining information on congressional hearings and policy mood data relative to public health appropriations could inform health officials while planning targeted congressional outreach and appropriations strategies that influence public health funding for the community.

In this chapter, I will provide an overview of my study. I will provide a brief summarization of research literature surrounding the theory of budget and policy punctuations and a description of the need for addressing factors that influence changes in federal public health funding levels. In addition, I will describe the nature of my study as well as address the assumptions, limitations, and the significance of conducting this study.

Background

Punctuated equilibrium theory (PET) has transformed the analysis of the policy process through addressing policy changes. According to Jones and Baumgartner (2012), policymaking was considered disjointed with decision makers having to manage between

balancing budgets, while dealing with negative and positive feedback within the budget environment. As a result, the analysis of budget changes within PET has continually generated a study towards greater complex systems. In the United States, the public health system is composed of a complex multilevel funding stream, which funds public health programs at the local, state, and tribal levels of governments (Honore & Gapenski, 2014). At all levels, programs receive a level of congressional attention, more or less, during congressional sessions.

Studies surrounding PET have focused on budgetary and policy changes within state and federal spending levels and examined factors correlating budgetary changes within government spending. Breunig and Koski (2006) and Ryu (2009, 2011) examined the factors that cause budget stability and punctuations among state budget categories, including health. Examining federal spending, Mortensen (2009) linked congressional attention to federal budget spending levels by providing a longitudinal, multi issue assessment of congressional hearings and public attitudes relative to spending levels. Brown (2010) stressed the issue of discrepancies in public health funding and indicated considerable budgetary discrepancies between the budget authorities allocated to medical care as opposed to the allocations to public health. Leider et al. (2012) discussed the critical role that federal public health funding plays in the state government's budget and indicated the need for further research. Hegelich, Fraune, and Knollmann (2015) used the punctuation equilibrium theory of information processing models as it was processed by the political system to identify budgetary changes over time in association to multiple attention indicators. From a global health perspective, Martin and Streams (2015)

examined the distribution of annual change in national government health spending over a period compared to spending on global health activities and found higher levels of punctuations in health spending on global activities as opposed to domestic health spending. Researchers have explored the relationship between changes in congressional attention and changes in public spending; however, they have not focused on federal public health spending levels.

Relative to public attitudes, previous researchers have examined public attitudes and found adequate support for public health spending. Blendon, Hunt, Benson, Fleischfresser, and Buhr (2006) examined Americans' health priorities in respect to the importance of health care, views on national spending and health care, and the top general health concerns using public opinion surveys. Not only did Americans believe that federal public health spending should increase, their findings also indicated that most Americans were happy with their local health departments. Blendon, Benson, SteelFisher, and Connolly (2010) also explored Americans' attitudes about the public health system, examining Americans' views on overall spending and public health. The authors found that Americans supported an increase in federal spending on public health programs. In addition, Mortensen (2009) examined public spending attitudes relative to budgetary distributional changes in federal health spending. Overall, findings from studies were consistent that public opinion did matter to public policies.

Much of the literature relative to policy theory and budget authority can be found in studies using the PET. For example, Mortensen (2009) examined across-the-board federal spending categories to determine which areas of spending received a significant

amount of congressional attention and which categories have more favorable public opinion. With this study, I addressed a gap within the PET policy field relative to policy punctuations and federal public health funding. Previous studies have not conveyed the impact of congressional attention and policy mood on federal public health appropriations. In this study, I focused on the role of congressional attention and policy mood influencing federal public health spending because this information could better inform public health policy decision makers of governmental and nongovernmental organizations when generating support for public health funding. Decision makers can increase their understanding of the policy-making process to ensure their institution continues their commitment to prioritizing public health programs.

Problem Statement

Through the enactment of appropriation legislation, Congress controls federal spending using the FY 2015 annual appropriations process (Tollestrup, 2014). Due to reduced federal spending, these budgetary actions have also reduced federal public health funding (Redhead et al., 2014). The USPHSA included in this study receive discretionary appropriations from Congress; these federal agencies include the Agency for Healthcare Research and Quality, Agency for Toxic Substances and Disease Registry, the Centers for Disease Control and Prevention (CDC), the Food and Drug Administration, the Health Resources and Services Administration, the Indian Health Services, the National Institutes of Health, and the Substance Abuse and Mental Health Services Administration (SAMHSA). Since 2010, out of the five of eight USPHSAs funded through the Labor-Health and Human Services-Education Appropriations Act (LHHS), only the SAMHSA

received funding in FY 2015, which was level with that of FY 2010 (Redhead et al., 2014). In FY 2015, agencies such as the CDC could have experienced reductions affecting "safety net programs" that are critical to implementing the Affordable Care Act (Redhead et al., 2014, p. 13). The agency's funding fluctuated between FY 2010 and FY 2015 experiencing a slight increase from $10.9 billion to $11.3 billion (Redhead et al., 2014). The reduction in funding for the CDC was offset by funding from other sources, primarily the Affordable Care Act and the Prevention and Public Health Fund. SAMSHA's funding over the same period remained leveled at $3.6 billion, with about 95% of its funding being discretionary appropriations (Redhead & Dabrowska, 2015). Understanding the need for a national public health action plan, the Institute of Medicine (2012) recommended a national plan that included increasing support for public health through the constituencies and legislators.

The ability of local health departments (LHDs) to provide essential public health services depends on a reliable funding stream of federal public health funding. During budget periods that include reductions in federal public health funding, LHDs in Wisconsin forecasted a 4.7% reduction in revenues to support public health services, and based on population growth, LHDs expected to see a decline of 6.6% (Reschovsky & Zahner, 2016). LHDs in Connecticut identified alternative revenue sources and adjusted services that were considered nonessential for delivering public health services and cutting staff and reducing salaries (Prust et al., 2015). Regional health departments in Nebraska also faced challenges maintaining fundamental public health services due to limited resources (Chen, Jacobson, Roberts, & Palm, 2012). As a result, there was

uncertainty within the budgetary environment about the future of federal public health funding available to support local public health.

Policy decision-making is sustained by a course of dynamic changes based on congressional attention during the congressional appropriations process. For federal public health agencies, federal appropriations are subjected to external factors throughout the congressional appropriations process (Schick, 2007). During this process, the Labor, Health and Human Services, Education, and Related Agencies Appropriation subcommittee make recommendations for funding public health and social services agencies (Saturno, Heniff, & Lynch, (2016). For public health agencies, most funding is discretionary appropriations and political influence from constituents and public health actors may possibly impact the level of funding appropriated for public health services (Elwood, 2008).

Scholars have examined the impact of congressional attention and public attitudes toward federal public spending for specific federal budget functional spending levels. These studies were limited to examining government-wide spending levels or social spending levels and not just public health spending levels. Even when addressing health care spending, previous studies have not specifically addressed federal public health spending levels. Previous researchers have focused on Congress and the public and which federal funding category was popular or preferable across government- wide spending levels, such as comparing education and health care (Barry & McGinty, 2014; Ellis & Faricy, 2011; Faricy & Ellis, 2014; Hegelich et al., 2015; Mortensen, 2009). Challenges remain in determining factors that influence federal spending, especially when examining

distinct levels of funding. Ryu (2009, 2011) found variations in determining empirical factors influencing budget punctuations concerning varying degrees of impact, especially based on various levels of funding.

As previously stated, budget policy research has addressed the influence of external factors on federal spending; however, the impact on federal public health budget authority was limited as it relates to policy punctuations (Jones, Baumgartner, & True, 1998; Robinson & Caver, 2006; Workman, Jones, & Jochim, 2009). In this study, I addressed the influence that congressional attention and policy mood have on federal public health spending. The results of this study filled a gap in the literature on assessing policy punctuations by narrowing the focus from government-wide spending levels down to only federal public health appropriation levels.

Purpose of the Study

The purpose of this study was to understand policy punctuations as they relate to changes in federal public health appropriations levels. In this study, I used a quantitative approach to examine the relationship of congressional hearings and policy mood (i.e., the independent variables) on the policy outcome of federal public health appropriation (i.e., the dependent variable). In this study, I focused on federal public health appropriation that supports the federal public health agencies. I analyzed data from the 1947–2015 appropriations, congressional hearings, and policy mood collected by the Policy Agenda Project (PAP).

The variables for the study were defined by the changes in the level of appropriation, congressional hearing days, and policy mood scores. The dependent

variable, federal public health appropriation, was the amount of budget authority appropriated by Congress for a given fiscal year. This variable also served as the policy outcome for the study. One of the two independent variables, congressional attention, was defined by the number of congressional hearing days. My study captured the number of congressional hearings days by retrieving congressional hearings that included public health or health as a topic area. The second independent variable, policy mood scores, defined the response of a supportive or unsupportive attitude towards federal public health spending. The policy mood variable was a numerical score that could also be interpreted as a liberal or conservative response to the amount of funding the nation should spend on public health.

Research Question and Hypothesis

Using the quantitative approach, I examined the research question: How have congressional attention regarding public health issues and the public's policy mood influence public health appropriations since 1947?

$H_0$1: There was no relationship between the change in the level of federal public health appropriations and congressional hearing days focusing on public health issues.

H_a1: There was a relationship between the change in the level of federal public health appropriations and congressional hearing days focusing on public health issues.

$H_0$2: There was no relationship between the change in the level of federal public health appropriations and policy mood scores focusing on public health attitudes.

H_a2: There was a relationship between the change in the level of federal public health appropriations and policy mood scores focusing on public health attitudes.

Theoretical Foundation

Punctuated Equilibrium Theory (PET)

The theoretical framework for this study was based on the PET. The origin of the PET was linked to the evolution theory in biology, which focuses on explaining the development and differences among species (Prindle, 2012). Originated as a counter perspective to Darwinism, this theory or model, which focused on stability and change, influenced political science (Prindle, 2012). However, Darwinism emphasized, "species were not permanent, but transitional moments" (Prindle, 2012, p. 24). In the policy process, PET seeks to explain stability and change making this theory appropriate as the theoretical basis for this study. While introducing PET, Baumgartner and Jones (1993) pursued to explain policy-making through policy stability and policy change. The complex systems involved in PET has made it applicable to defining complex systems within political institutions and policy processes (Baumgartner, Jones, & Mortensen, 2014).

The PET is a theory of the policy process. The theory consists of major theoretical propositions and hypotheses within the policy process: agenda setting and information processing (Baumgartner et al., 2014). Both propositions support the components of policy and budget changes within the policy process. According to Kingdon (2011), agenda setting is defined as a list of subjects or problems that have dictated the attention of congressional committees, government officials, or even people outside of government

such as interest groups. Information processing depicts the flow of information among governmental entities and Congress depicting to what extent the information was being processed (Baumgartner et al., 2014). The PET will be explained further in Chapter 2 along with its relevance to budget and policy punctuations.

Policy and Budget Punctuations

The PET has been tested and measured within the areas of federal spending, state spending, and budget and policy punctuations and change. Martin and Streams (2015), Mortensen (2009), Liang and Fiorino, (2013), and Robinson and Caver (2006) addressed the problem of the impact of the distribution of budget changes in federal spending. Mortensen studied the link between changes in political attention and changes in federal spending, while Martin and Streams explored federal spending from a global perspective by examining the evidence of punctuations within the Organization for Economic Cooperation and Development member countries. The PET describes policy changes over an extended period, including when policy appears to be in stasis (Baumgartner et al., 2014). A review of the literature revealed the use of PET to explain policy change. The relevance of the theory was useful for explaining changes in public budgeting using the policy choice model of PET (Baumgartner et al., 2014).

The PET related to this study of congressional attention and public policy mood and the impact on federal public health spending. Baumgartner and Jones (1993) explained policy-making through policy stability and policy change. The PET describes two patterns of policy changes occurring. One pattern composed of extended periods of policy stasis and another pattern consisting of large-scale policy changes (Baumgartner et

al., 2014). The PET has also been used to explain policy changes in public budgeting by using the policy-choice model. With political attention as a component of the policy-choice model, it can be linked to a policy outcome of budget authority (Nowlin, 2011). The theory was relevant to the current study because of its use to explain and define budget and policy change due to significant events, such as legislative turnovers.

Nature of the Study

In this quantitative study, I used bivariate linear regression to examine congressional attention and policy mood and their influence on budgetary changes for federal public health appropriation during fiscal years 1947–2015. Regression analysis has been used to identify factors that influence the level of government spending and public health spending (Faricy & Ellis, 2014; Franklin, 2002; Mays & Smith, 2009; Rhee, 2014; Santerre, 2009; Stegner & Fort, 1995). Regression analysis allows for determining whether the independent variable predicts the dependent variable (Field, 2013). Therefore, this statistical test was appropriate for pursuing the relationship between congressional attention and federal public health budget authority in this study. The dependent variable, federal public health appropriation, was budget authority provided in federal law to incur financial obligations that resulted in expenditures, or outlays, of federal funds to public health activities and services. Such obligations include contracts for the purchase of supplies and services, liabilities for salaries and wages, and grant awards (Redhead et al., 2014)). Appropriations are the most usual form of budget authority (Anderson & Harbridge, 2010; Redhead et al., 2014). In this study, I focused on federal public health funding that supports the federal public health agencies.

I used the two independent variables of congressional hearings and policy mood to determine the external factors influencing federal public health funding. Congressional hearings are committee sessions in which legislative members obtain information on proposed legislation and investigate or oversee the activities of a government department or agency (U.S. Government Information, 2016). Congressional hearings are also exploratory, allowing the members to hear testimony and data from witnesses regarding specific issues, such as public health (Hegelich, Fraune, & Knollmann, 2015; U.S. Government Publishing Office; 2015; Worsham & Stores, 2012). Using a secondary data source, I retrieved the congressional hearing data from the PAP. The Policy Agenda Project (PAP; 2017) has maintained a database of policy specific-moods data to provide researchers with mood measures. By generating longitudinal measures, the database captured public opinion across specific policy domains (PAP, 2017). The database matched each survey item with a policy code from the PAP coding scheme. Given that, the coding scheme was consistent with the congressional hearings data allowing for comparison between the two variables.

Definitions

Appropriation: Approval by a legislative body for an agency to spend funds for a specific line-item within its budget. Appropriations create the authorization for spending the amount in the budget (Finkler, 2005; Wlezien & Soroka, 2003).

Budget authority: The authority of the federal agency to incur financial obligations through appropriations. Appropriations are the most common form of budget authority (Anderson & Harbridge, 2010; Redhead et al., 2014).

Congressional attention: Political attention indicated through interest by Congress to a specific topic area using legislation, hearings, and/or forums to gather additional information about the topic area (Mortensen, 2009; Xinsheng, Lindquist, & Vedlitz, 2011).

Congressional hearings: Committee sessions in which legislative members obtain information on proposed legislation and investigate or evaluate/oversee the activities of a government department or agency. Congressional hearings may also be exploratory allowing the members hear testimony and data from witnesses regarding specific issues, such as public health (Hegelich et al., 2015; U.S. Government Publishing Office, 2015; Worsham & Stores, 2012).

Federal block grant: Block grants are the allocation of financial resources by the federal government to state governments, which include broad domains of activity mostly determined by the state. State governments are charged with the disbursement of funds and ensuring funds appropriately allocated to specific programs and providers (Shi & Johnson, 2014).

Federal public health funding: Funding appropriated by Congress to the eight U.S. Public Health Services agencies, which include Agency for Healthcare Research and Quality, Agency for Toxic Substances and Disease Registry, the CDC, the Food and Drug Administration, the Health Resources and Services Administration, the Indian Health Services, the NIH, and the SAMHSA. Collectively, the agencies provide and support the essential public health services (Redhead et al., 2014).

Assumptions

I made two assumptions in this study concerning the accuracy of the U.S. General Social Survey (GSS) data sets and the process by which PAP included correctly-coded GSS and congressional hearings data. The GSS gathered survey data on American respondents to track and monitor trends on attitudes and behaviors (National Opinion Research Center (NORC; 2017). One assumption was that the GSS data was collected correctly and was reliable. The National Opinion Research Center (NORC; 2016), which conducted the GSS, extensively studied and documented the research design to ensure the reliability of the GSS and the individual surveys. Therefore, I assumed that the surveys captured the correct public attitudes of the participants regarding the level of public health spending and the participants responded honestly to the questions. NORC has conducted several studies that have examined question-wording for public spending surveys (Lavrakas & Traugott, 2019; Rasinski, 1988; Smith, 1984, 1987, 2006). The assumptions are necessary to ensure the policy mood measure was being calculated with reliable survey responses. The second assumption concerned the process the PAP used to aggregate the GSS data into policy mood scores and the coding of the congressional hearing. The PAP has used the correct procedures in matching each survey item with a policy code from the coding scheme (PAP, 2015).

Scope and Delimitations

The scope of this study was defined by the secondary data and the parameters of the research study. In this study, I sought to answer the question of whether there was a relationship between the predictive factors of congressional hearings and policy mood

relative to federal public health appropriations. Furthermore, the scope of this study factored in an analysis of the strength of the relationships between the independent factors and the dependent variable. In this study, I focused on federal public health appropriation, which was the dependent variable. The independent variables of congressional hearing days and policy mood scores were used as the predictive factors for the regression analytic study and the data set was retrieved from the PAP. Primarily, the committee sessions (i.e., the congressional hearings) consist of the negotiation of federal public health funding to the USPHSA. Public policy mood data represents an aggregate measure of the public's attitude towards federal public health spending (PAP, 2017). The population for this study included federal public health funding, congressional hearings, and policy mood data from 1947–2015.

The scope of this study included the applicability of the policy process theories. The theoretical frameworks of PET embraces all the aspects of information processing relative to policy punctuations and congressional attention (Baumgartner et al., 2014). I also considered the Advocacy Coalition Framework (ACF) for this study. The ACF focuses on policy change and policy learning within a policy subsystem (see (Jenkins-Smith, Nohrstedt, Weible, & Sabatier, 2014). ACF was expanded and clarified through Sabatier and Jenkins Smith (1999) to include *external shocks*, such as public opinion, changes in government coalitions, and outputs from subsystems. The PET and ACF share some of the same variables: institutional settings and policy change (Schlager, 2007). Both theories regard policy changes over a period of time, and both theories define policy change because of noteworthy events that include legislative and organizational changes

within entities (Schlager, 2007) However, for this study, I selected PET because the theory explained policy change within the context of budget policy.

I did not seek to explain entire changes in budgetary decision-making as result of congressional attention in this study. Also, my study did not include all components of health spending relative to the federal budget, health care, or Medicare and Medicaid spending levels, which were beyond the scope of this study. In this study, I did not intend to analyze total public health funding encompassing federal, state, and local level spending. The process for appropriating funding for Medicare and Medicaid is mandatory, rather than discretionary funding as it is for the USPHSA (Redhead et al., 2014). It was beyond the scope of this study to make such determinations that influence public health spending levels among all the state and local programs because these entities had their own separate governmental appropriation levels. There are other factors possibly influencing public health spending, such as public health advocacy, public attitudes, and other budgetary decisions, that limit federal spending at various levels (Mortensen, 2009).

The findings of this study were valid and generalizable to the specific dependent variable, federal public health funding. The results of this study are not generalizable to other types of state and local public health funding or other time periods for public health funding. The findings of this study were based on the specific budget period for the federal congressional appropriation cycle including federal public health appropriations. Therefore, the results of this study were not generalized to past or future budget situations.

Limitations

The limitations of this study were relative to the research design and methodology. The sample of congressional hearing days was limited to regular congressional hearing sessions. The data set did not include hearings held in executive sessions (this included most committee business meetings and Senate nomination hearings), hearings dealing with investigations involving matters of individual privacy, hearings involving matters of national security, or hearings simply not released at the discretion of the committee chairs. The congressional hearing database did not include information from closed hearing sessions due to availability. The congressional hearing days focused on the regular hearings in which public health appropriation decisions are made in committees. The data set also provided a broad range of congressional committees within the House and Senate. Retrieving congressional hearing days that were related to health resulted in congressional hearing days collected across the spectrum of congressional committees, not just health-related committees. Some committees may have only conducted a few hearing days that focused on a health-related matter that was combined with a non-health-related issue.

Another limitation in the study was the use of the health budget data set. The composition of the health budget line in the data set has changed over the past 68 years. Furthermore, the reorganization of the federal government agencies in 1980 resulted in only five of the eight USPHSAs being funded through this health budget line (Redhead et al., 2014). The other public health service agencies were funded through Interior/Environment and Agriculture subcommittees and, therefore, were not captured in

the public health appropriations funding (Redhead et al., 2014). However, the funding for the major public health agencies, such as the CDC, NIH, and SAMSHA, were captured. Given that, much of the discretionary federal public health appropriation was captured for this study.

Using secondary data, personal bias did not present an issue in the collection of the data; however, personal bias could have influenced the description and explanation of the findings of this study. I currently work at one of the USPHSAs noted in this study, and this could have presented a personal bias towards my home agency. To avoid personal bias, I focused on an aggregated amount of federal public health funding that supported the federal public health agencies and not the one specific agency where I am employed. The last 10 years I have worked at the agency has been in health policy rather than in a financial position that could have affected how I interpreted the findings. In addition, to reduce bias, it was important for me to avoid using terms and political language that appeared to suggest political ideology while describing the findings. Although the results from this study were interpreted relative to specific congressional hearings based on attention indicators, the value of this study is limited due to personal bias. Analytical bias also could have been an issue in this study and was addressed by testing the null hypothesis using a statistical *t* test.

Significance

Scholars have researched congressional attention and public policy mood relative to federal spending; congressional attention has also been studied to examine its relevancy to policy issues encompassing public spending (Hegelich et al. 2015;

Mortensen, 2009; Xinsheng et al., 2011). However, limited research has focused on congressional attention and its impact on federal public health spending. Researchers have indicated the impact of public opinion on how social spending was allocated (Ellis & Faricy, 2011) and examined factors, such as congressional attention, public attitudes, organizational changes, and research and development, which influenced federal and state spending levels (Barry & McGinty, 2014; Blendon et al., 2010; Liang & Fiorino, 2013; Robinson, Flink, & King, 2014). However, in this study, I explored how congressional attention and policy mood influenced appropriated funding levels for federal public health spending. Assessing the impact of congressional attention and policy mood on federal public health spending added to the policy punctuation literature on congressional factors influencing the level of public health budget authority.

Public health policy decision-makers and organizations supporting public health programs could find the results of this study beneficial while planning congressional outreach and determining the allocation of resources within the community. Obtaining information on the relationship between congressional attention and policy mood on federal public health appropriations could assist federal health officials in planning congressional outreach and appropriations strategies, which improve the implementation of public health programs. Health officials in state and LHDs could use this information in the process of allocating resources to support the essential public health services used to improve the health of the community. In addition, public health advocacy groups could use this information to target public health messages to Congress. As a result, both health officials and public health advocacy groups can influence the level of resources needed to

improve maternal and child health programs, infectious diseases, and chronic diseases programs.

Examining the relationship between the external factors of congressional attention and policy mood on the policy outcome of federal public health spending supports social change within the public health policy field. By examining federal public health spending level trends in this study, the findings offer the extent to which congressional attention and policy mood influences punctuations in funding levels during extended periods of stability; therefore, supporting the level of social change within the state or local community. Research has also indicated a relationship between levels of public health spending and health outcomes within communities and the need for more public health funding research to understand the strength of the relationship because it impacts social change within the community (Bernet, 2012; Bradley et al., 2016; Marton et al., 2015; Mays, 2011). Public health policy decision-makers supporting public health programs could find the results beneficial during strict fiscal periods as they target resources working toward social change within their state or local community.

Summary

For public health agencies, external factors, such as political influence from public health actors and the public health attitudes of constituents, could impact the level of funding appropriated. Although budget theory literature has addressed political attention and public attitudes towards public spending, there was limited extant research that addressed the impact of congressional attention and policy mood on federal public health funding levels. Using a quantitative method, I examined congressional attention

and policy mood to explain their relationship to federal public health spending. Understanding the influence of federal public health spending was necessary to assess the resources needed to deliver the core essential public health services at state and LHDs that work to implement social change (see Leider et al. 2012; Livingood et al., 2013).

In Chapter 2, I will provide the literature review for my study. I will describe my literature search strategy and present the review of the literature addressing the PET. In this chapter, I will also highlight prior research on factors influencing budgetary changes. Finally, I will provide a rationale for the selection of congressional attention, policy mood, and federal public health appropriations as variables for my study.

Chapter 2: Literature Review

Introduction

Previous studies have examined congressional attention and public attitudes toward federal public spending levels; however, through a review of the literature, I found that research related to federal spending levels was limited to examining government-wide spending levels and not specifically public health spending levels. Even when narrowed to health care spending, the extant research did not specifically address federal public health spending levels. Therefore, the purpose of this study was to examine the influence of congressional attention and policy mood on the policy outcome of federal public health appropriations. In this study, I used a quantitative research design to understand policy punctuations as they relate to federal public health spending levels.

Research studies surrounding public health funding levels have tended to focus on the necessity of funding at the state and local levels and the correlation between the amounts of funding received in communities and health outcomes. Furthermore, studies conveyed the necessary public health resources to deliver the core essential public health services at state and LHDs (Leider et al., 2012; Livingood et al., 2013). Other research has focused on the relationship between levels of public health spending and health outcomes within communities and the need for more public health funding research (Bernet, 2012; Bradley, et al., 2016; Marton et al., 2015; Mays & Smith, 2011). Globally, per capita, public health spending remained insufficient to support necessary public health outcomes in many countries (Martin & Streams, 2015). Studies from such scholars

have provided the significance of adequate public health funding at the state and federal levels.

Congressional funding decisions are made in a complex environment with political and environmental constraints. Mortensen (2009) found that popular spending programs receiving decreased congressional attention might also find reductions in funding; however, programs receiving increased congressional attention would result in increased funding levels. Hegelich et al. (2015) identified that congressional clusters indicating congressional attention on hazardous waste and toxic chemical regulations led to a reduction in the nuclear energy area for research, development, and demonstration (RD&D) budget. However, Liang and Fiorino (2013) found that strong congressional support including RD&D funding stability leads to greater technology innovation. The limitation of the authors' study did not go as far as to link RD&D funding as the dependent variable to gain a better understanding of the variations in funding levels. Challenges remain in determining factors that influence governmental spending, especially when examining various levels of funding. Mays and Hogg (2015) examined the impact of economic shocks on implementing public health protection and found current federal resources failed to avert reductions in providing adequate public health protections. Thus, Congress was more likely to recommend additional public health funding in the event of an infectious outbreak. Although researchers have examined factors influencing federal spending levels across budget categories, studies have not been conducted to adequately address the influence of congressional attention and policy

mood on federal public health funding. Therefore, I addressed this gap in the PET literature with this study.

Chapter 2 will begin with a discussion of the literature search strategy I used to identify relevant peer-reviewed resources related to congressional attention, policy mood, and federal public health spending. I will highlight studies related to the PET and the relevancy of policy and budget punctuations within PET. In addition, I will focus on research expounding on congressional attention and federal public spending with an emphasis on federal public health spending. I will also consider studies relevant to the methodological approaches examining budgetary and policy changes relevant to congressional attention and policy mood.

Literature Search Strategy

I conducted a literature review exploring the extent to which congressional attention and policy mood affects federal public health funding. The literature review included the following search strategies. Databases used in the literature search included EBSCOhost Research, Pub Med, Journals@OVID, Political Science Complete, Business Source Complete, SAGE Premier, Academic Search Complete, and Google Scholar. A combination of search terms used to conduct the literature review included: *congressional attention, congressional committees and public health, political attention, public health spending, congressional attention and public health funding, congressional attention and public health spending, congressional hearings, congressional hearings and public spending, policy mood, policy mood and public spending, public health finance, public health funding, public attitudes and public health spending, public*

attitudes and political attention, and *linear multiple regression and public health spending.*

The objective of the literature review was to ensure a comprehensive literature search of peer-reviewed articles published from 2000 to 2017. Although my emphasis was on reviewing peer-reviewed articles published within the past 5 years from 2012 to 2017, I also reviewed editorials, conference proceedings, and workgroup reports. While conducting the literature review, current research was limited to the factors of congressional attention and policy mood and its impact on federal public health funding. Articles published before the year 2000 were used to provide background and historical information on study topic area.

Theoretical Foundation

Punctuated Equilibrium Theory (PET)

The theoretical framework for this study was the PET. According to Prindle (2012), the origin of the PET was linked to the evolution theory in biology, which focused on explaining the development and differences among species. Originated as a counter perspective to Darwinism, this theory or model focused on stability and change influenced political science (Prindle, 2012). The complex systems involved in PET made it applicable to defining complex systems within political institutions and policy processes (Baumgartner et al., 2014).

The PET explains stability and change within the policy process, making this theory appropriate as the theoretical basis for this study. While introducing PET, Baumgartner and Jones (1993) sought to explain policy-making through policy stability

and policy change. According to Nowlin (2011), there are two patterns of policy changes occurring within the policy process: One consists of extended periods of "policy stasis" and the other consists of "large-scale policy changes (p. 49)." Initially, this theory was formed through three other theories and concepts: social theory, policy agendas, and policy subsystems (Baumgartner & Jones, 1993). Baumgartner & Jones (1993) described each of the three theories and concepts within the policy process. (1) Through the social choice theory, there was no equilibrium within American politics; instead, institutions provided a framework that promoted stability. (2) The policy subsystem or issue networks promoted stability if the subsystem alienated itself from outside factors, which challenged the stability of the subsystem. (3) Finally, the agenda-setting literature promoted the importance of current ideas, which led to a dramatic policy change within the subsystem or to replace the subsystem. Lovett, Bevan, and Baumgartner (2015) stated that agenda setting was a prerequisite for influence and examined the effect the State of the Union Address has on congressional attention relative to a president's approval ratings. No matter the state of a divided government, a popular president can direct congressional attention and, therefore, influence policy change (Lovett et al., 2015). The PET defines the equilibrium component, the policy subsystem, and the development of an agenda within the policy process (Baumgartner & Jones, 1993).

Through the years, PET has transformed the analysis of the policy process through addressing policy and budget changes. Policymaking was considered disjointed while balancing budgets with positive and negative feedback within the budget environment (Jones & Baumgartner, 2012). To explain the theory of policy change, Crow

(2010) employed PET to examine the level of media coverage relative to agenda status. The study of budget changes has continually generated an examination by scholars towards greater complex systems explaining policy change. Within the policy process, negotiation of public health appropriation decisions occurs in congressional hearings, support for increased public health funding through public health attitudes, and advocacy for sustaining public health funding for public health services through the formation of policy networks (Blendon et al., 2006; Henry, 2011; Ryu, 2011). The PET focuses on those mechanisms that lead to policy and budget change within the policy process.

The PET evolved into a theory of information processing, attention, and policy choice by government. Each of the components of PET are interrelated. Information processing consists of how governments process the information they received and how the information received was prioritized (Baumgartner et al., 2014)) .According to Nowlin (2011)) for example, Congress receives an abundance of information to process; rather, than process all the information, Congress delegates to the federal agencies for processing (Nowlin, 2011)). Thus, the federal agencies gained a new role in information processing, which now influenced the agency's policy-making role. The congressional attention component consists of those agenda items requiring congressional attention and possibly affecting public opinion (Nowlin, 2011). The policy choice model states that the overabundance of information that Congress received was "neither rare nor costly"; therefore, Congress delegates the processing of the information to the federal agencies (Nowlin, 2011 p. 51).

The PET consists of major theoretical propositions and hypothesis within the policy process: agenda setting and information processing. Both propositions support the components of policy and budget changes within the policy process. According to Kingdon (2011), the agenda- setting process narrows the focus of several problems to those of most significance during the policy process (Kingdon, 2011). Even within health, agenda-setting can narrow issues to bio- medical health or public health. Problem recognition is important within the agenda-setting context, along with the political climate at the given time based on the changes within the agenda of a new presidential administration or the national mood (Kingdon, 2011). Furthermore, participants who received considerable press coverage and public attention affect the agendas and impact and enhance an agenda item. Studies relative to agenda setting have included topics surrounding media coverage, congressional hearings, and the presidential State of the Union address (Crow, 2010; Lovett et al., 2015; Pacheco & Boushey, 2014; Xinsheng et. al, 2011). Attention is important to understanding the process of policy change.

Information processing depicts the flow of information among governmental entities and Congress and depicts to what extent the information is being processed (Jones & Baumgartner, 2012). Thus, the information processed could result in an overreaction or under reaction to as the information flows from the environment into the policy system. Furthermore, the information support budget and policy punctuations influenced by the way information flows. Jones and Baumgartner (2012) stated that information processing was disproportionate during the policy-making process due to the stability of problem prioritization contrary to the flow of information. Ryu (2011) found

that institutional frictions contribute to budget punctuations but also that legislative professionalism enhanced information processing within the congressional hearing model. Hegelich et al. (2015) and Workman et al. (2009) used the theory of information processing within the policy process to demonstrate how decisive budget changes linked to the attention of Congress, the president processes the information, and how institutions and political systems categorize information through prioritization. The role of processing information in a policy-making system was to be interpreted and translated into policy action (Jones & Baumgartner, 2012).

Policy and Budget Punctuations

The PET has been tested and measured within the areas of federal spending, state spending, and budget and policy punctuations and change. Liang and Fiorino (2013), Martin and Streams (2015), Mortensen (2009), and Robinson and Caver (2006) addressed the problem of the impact of the distribution of budget changes in federal spending. Mortensen studied the link between changes in political attention and changes in federal spending, while Martin and Streams explored federal spending from a global perspective by examining the evidence of punctuations within the Organization for Economic Cooperation and Development member countries. Martin and Streams also sought to show whether punctuation occurred mostly in public spending on global health as opposed to each country's own national health priorities. Robinson and Caver tested hypotheses for PET related to reform of congressional policy and federal spending among the Office of Management and Budget (OMB) budget functions. Liang and Fiorina examined the influence of the stability and magnitude of federal RD&D spending on

technology innovation. Rather than observe for punctuations, the authors examined for stability in federal spending. Studies examining budget and policy changes have sought to identify factors that influence budget distributions.

Evidence of PET has been studied among state budgets to explain budget changes. Breunig and Koski (2006) examined the distribution of budget changes by proposing that state budgets were punctuated and what was the extent of punctuation variations across the states. The exploration of factors explaining budget punctuations was examined in government spending. Ryu (2009) explored which factors cause budget stability and punctuations among state government spending. To explain the occurrence of budget punctuations within funding government programs, Ryu (2011) also examined whether specific factors influence state budget punctuation differently depending on the nature of the programs in questions. Furthermore, Breunig and Koski (2012) examined state budgets to determine the differences between more punctuated budgets and less punctuated budgets. Research indicates an attempt to explain budget punctuations among state budgets through examining the influence of policy factors (Breunig & Koski, 2006; Breunig & Koski, 2012; Ryu, 2009).

PET describes policy changes over an extended period, including when policy appears to be in stasis. Also, the relevance of PET was useful for explaining changes in public budgeting using the policy choice model of PET (Baumgartner et al., 2014). Robinson et al. (2014) investigated the role of organizational history its impact on punctuated budgetary change and its relationship to experiencing policy change. Crow (2010) attempted to use PET to explain the process of policy change for recreational in-

channel water rights. Findings suggest that the PET did not apply to local-level policy change. However, because my study included funding at the federal level, PET was used for examining the influence of congressional attention and policy mood on the changes in federal public health spending levels.

Rationale for the Selection of Theory

This study of congressional attention, policy mood, and federal public health funding examined the theory of policy punctuation, as it relates to policy outcomes and policy changes relative to federal public health spending. The theory of policy punctuations was used for this study because the theory was attention-driven and agenda-based relative to budget models. By examining the research questions of the influence of congressional attention and policy mood on federal public health funding, this study builds upon the theory of agenda-setting and policy punctuations.

Prior research on policy punctuations has examined factors influencing federal and state spending levels. Robinson et al. (2007) attempted to determine the factors contributing to the frequency of policy punctuations in the funding of a public-school district over a 12-year period. Also, Robinson et al. (2013), using the theory of policy punctuations, found budgetary changes were related to organizational changes within a state school district. Finally, Liang and Fiorino (2013) examined federal R&D spending levels to determine the level of policy punctuations relative to innovation activities. The study of policy punctuations in federal spending occurs when there are policy changes within the policy process. This study examined those changes by determining the influence of congressional attention and policy mood on federal public health funding.

Public Health Financing Within the Public Health System

Public health finance is the field of study that incorporates the areas of acquisition, utilization, and management of public health resources for the delivery of essential public health services. Public health finance focuses on the impact of integrating resources on population health and the public health system (Honore & Gapenski, 2014). Within the public health system, public health programs are financed through a combination of federal, state, and local level funding or appropriations. This combination of funding supports primary public health functions at various levels of government. Much of federal public health spending is distributed to the states as grants and the states sub award grants to the local health departments. At each level of government, specific functions are assigned to deliver essential public health services.

Financing of public health activities at the state and local levels through federal funding encompasses a fiscal federalism framework. The fiscal federalism framework includes federal funding mechanisms such as grants, and cooperative agreements distributed to states and local health departments through agencies like the CDC (Honore & Gapenski, 2014; Ogden, 2012). The types of grants awarded through the federally funded systems consist of categorical grants (project and program based) block grants, and mandatory grants. Categorical grants give the federal agency control as to the allocation of funding at the state level for specific public health programs. However, block grants give the state health department more flexibility in disbursing funds among various public health programs (Honore & Gapenski, 2014). Mandatory grants, contrary to block grants are specifically described by Congress as to which program should

receive the funds. An example of a mandatory funding grant is the *Vaccines for Children Program*. Federal pass-through grants use the state entity as a pass through to provide funding to the local and community public health systems. The public health agency is responsible for using the federal funding awarded for the purpose for which Congress intends for it to be used according to enabling legislation.

Federal Budget Process

The federal budget process is a complex process defined through a multi-year cycle that begins with the formulation of the President's Budget and concludes with the audit of federal departments and agencies expenditures. The President's Budget process, led by the OMB, formulates the President's Budget with his policy agenda. Congressional budget actions supporting or not supporting the present's policy proposals occurs within the congressional budget process. Once Congress approves the budget and the president signs the appropriation bill, the federal agencies and OMB are responsible for implementing the budget. The federal process ends with the audit and review of the agency's expenditures. Although the necessary steps of the process are similar from year to year, the complexities of the budget process depend on the style of the president, the economic and political considerations under which the federal budget was prepared. (Keith, 2008; Schick, 2007).

The congressional appropriation process refers to annual appropriation measures considered by Congress under certain rules and procedures during the federal budget cycle. These measures provide discretionary funding for activities such as national defense, education, public health, homeland security, and general government operations.

Funding authority for these activities is provided annually and expires at the end of the federal fiscal year of September 30th (Tollestrup, 2014).

As part of the federal budget cycle, the president submits the budget to Congress while the House and Senate appropriation subcommittees hold hearings on the segments of the budget under their jurisdictions. The LHHS Appropriations Subcommittee focuses on the details of the budget justifications for the federal public health service agencies. The hearings also include a platform for agency directors to testify, as well as the supplementation of meetings and communications between the subcommittee staff and agency officials. Also, during this period, members of Congress, at the request of the subcommittee provide programmatic funding levels and language that is included in the appropriation bills and committee reports (Saturno et al., 2016).

Examining Changes in Governmental Spending

The PET has been tested and evaluated regarding its relevancy through the years in explaining the factors that influence federal public spending. Jones et al. (1998) stated there was a need for more rigorous quantitative analysis, rather than just general observations when analyzing cases to determine budgetary changes to support policymaking. The authors examined a hypothesis indicating whether punctuations explained normal operations or chance phenomena. (Jones et al., 1998). Robinson and Caver (2006) determined the current literature thoroughly demonstrated the existence of PET; however, there was not enough testing on the causes of punctuated equilibrium distributions, especially among congressional budgeting. Workman et al. (2009) determined that past research surrounding punctuated equilibrium theories were limited

and needed to become broader, based on contributions to public policy. Some authors such as Anderson and Abridge (2010) stated that the current budget models are *uninformative* about what constitutes an insignificant change that was expected to occur under incrementalism and its impact on policy decision making. Other concerns were determining reliable measures for budgetary policy to capture the government's commitment to programs, as well as the limited information on multivariate investigations related to PET (Robinson, Caver, Meier & O'Toole, 2007; Wlezien & Soroka, 2003)).

Researchers have approached the study of congressional attention and federal funding using PET. Using congressional hearing data from the policy agendas project, Hegelich et al. (2015) and Mortensen (2009) examined congressional attention relative to budgetary changes. Hegelich et al. used point predictions within the theory of PET to link specific punctuations in the research and development budget for the Environmental Protection Agency to attention changes. The authors found that the budget changes are not as specific as expected and leave room for further research within policy subsystems. Mortensen matched precisely the hearing data and spending data for the budget period. However, when examining public attitudes relative to budgetary changes, Mortensen identified one of the limitations of the GSS was the limited number of policy categories in the spending surveys. Results were limited to decisions of policymakers and the majority attitudes of the public. The lack of including policy advocates in the study called for a more general model that explains policymaking.

Other studies that included congressional attention and public health have focused on agenda setting among emerging health issues. Within public health, Pacheco and Boushey (2014) examined the level of congressional attention on emerging health issues by exploring the determinants of public health attention among the 50 states. The authors found that the internal impact gubernatorial attention was stronger than the national attention to tobacco and vaccines, furthermore no evidence of interest groups influencing the attention that states pay on tobacco or vaccines. More research was needed to explore the influence of congressional attention on public health funding.

Policy Mood

Policy mood is an aggregate measure of public opinion that describes the public views on policy choices made by the government. This measure of public opinion is analyzed as being liberal or conservative toward policy choices. Stimson's (2012) measure of policy mood was clarified by determining the dimensions of economic and cultural dimension correlated with policy mood. The author found that public opinion changes were based on how the public reacts against the ideological direction of the political party in power.

The measurement of policy mood has been used to determine the level of public responsiveness to federal public spending and assess the relationship between media consumption and public opinion. Ellis and Faricy (2011) argue that the public can recognize and respond to changes in direct spending (appropriations) and indirect spending (tax expenditures) for social and public health programs. Using Stimson's measurement of policy mood, Ellis and Faricy found that public opinion was not

responsive to the total amount of social spending but on how the allocations are made based on direct and indirect spending.

Levels of media consumption have been evaluated relative to policy mood. Johnson and Kellstedt (2014) assessed the relationship between media consumption and public opinion relative to policy mood. The authors found that policy mood levels of media consumption as well as the levels across types of media consumption moved in parallel with the opinions of similar dynamics.

For this study, policy mood was used to assess the relationship between federal public health funding and public opinion. Public attitudes towards federal spending were examined in studies focusing on social and mental health spending. Ellis and Faricy (2011) and Faricy and Ellis (2014) examined public opinion toward social spending in the United States from the perspective of how allocations of government spending was representative of policy change. The authors found that public opinion was responsive to the total amounts of social spending when the allocations were based on direct or indirect spending levels. Further research was needed to examine where public opinion affects the balance of direct and indirect social spending. Faricy and Ellis examined the effects of policy framing on preferences for social spending. The authors found that support for social spending was generally high if the program was delivered through tax expenditures rather than through direct spending. The findings increased understanding of the relationship between the public and the hidden welfare state contributing to the policy-making process. Barry and McGinty (2014) hypothesized that personal experience played a role in determining public opinion for support of government funding for mental health

services. Findings concluded support among Americans for policy approaches broadening access to treatment with increased government spending. The study encouraged robust anti-stigma efforts, particularly in an era when mental illness was linked to dangerous with the news media.

Prior Research on Factors Influencing Budgetary Changes

Research studies indicated various approaches to using a quantitative research design in analyzing congressional attention and budgetary policy outcomes for federal and state pending. Using PET as a theoretical foundation, most quantitative policy studies focused on examining budgets and expenditures (Jones & Baumgartner, 2012). According to Sabieter (2014), budgets reacted to internal and external factors that infer the level of decision-making. Furthermore, the level of attention, current information, and the composition of Congress influenced an agency's level of federal funding.

Several studies examined the relationship between external factors and public spending levels. Mortensen (2009) and Hegelich et al. (2015) examined the link between congressional attention and federal spending. While Mortensen focused on federal-wide spending, Hegelich et al. concentrated on federal spending on nuclear energy. Hegelich et al. examined multiple attention indicators including Presidential attention of nuclear energy spending. Mortensen examined the link between changes in congressional attention and changes in federal spending among 12 budgetary outcomes. The longitudinal study included congressional hearing and public spending data from the PAP. In a different study, Rhee (2014) examined the effects of performance-based budgeting in a complex political environment. Thus, the author sought to find the

influence of performance measures impacting budget appropriations. Barry and McGinty (2014) Ellis and Faricy (2011) Faricy and Ellis (2014) examined the link between public opinion and federal spending for mental and social programs. Barry and McGinty examined the association between support for policies that resulted in increased funding for mental health programs and the respondents' social demographic characteristics as personal experience with mental illness. Using empirical analysis, Breunig and Kosig (2006) examined the distribution of annual state expenditures among 10 budget categories in 50 state budgets, determining differences relative to budget changes. The authors found budgetary changes occurred differently among the 50 states because of resource allocations and policy decisions.

Congressional Hearings and Federal Spending

Empirical analysis was used to examine the level of congressional attention using congressional hearings. Hegelich et al. (2015) examined budget changes over time using multiple attention indicators in the case of a U.S. nuclear energy policy. Using the stochastic process model, the authors analyzed the number of hearing days and the annual number of state of the union addresses to predict budget changes as indicators of policy changes. This process model analyzed the distribution of the outcome variable of budget changes. Ryu (2011) applied a quantitative research method design employing the House and Senate committee staff model to determine the impact of congressional hearings on budget punctuations. He analyzed 21 budget sub functions from 1988 to 2004 among the 50 states. The author conducted an empirical analysis using the logit regression model to denote whether observations are budget punctuations or not. Worsham and Stores (2012)

examined hearing activity from the Congressional Information Index Service, Index to Committee Hearings and Abstracts to Committee Hearings, to identify hearings occurring within the House, Senate Chambers associated with agricultural credit, and farm income policies. The authors' purpose was to compare House and Senate activity on agriculture activity among African Americans to determine differences congressional attention.

External factors are an important impact on federal agencies budgets. Scholars have examined congressional attention, presidential attention and public opinion determining influences on federal spending levels (Barry & McGinty, 2014; Faricy & Ellis, 2014; Lovett et al., 2015; Mortensen, 2009). As external factors have been studied as to their impact on federal spending levels, scholars have attempted to explain relationships between external factors and budgetary changes (Ellis & Faricy, 2011; Hegelich et al., 2015; Mortensen, 2009; Ryu, 2011). This research also examined federal spending levels concentrating on public health funding (Bernet, 2012; Blendon et al., 2010; Jarris, Leider, Resnick, Sellers, & Young, 2012; Mays & Smith, 2009). By focusing on the factor of congressional attention, this study explored the relationship between public health appropriations and this political factor.

Policy Mood and Federal Spending

Quantitative approaches to examining public opinion in federal spending have used policy mood databases, which include survey research. Johnson and Kellstedt (2014) used 11 questions and responses from the GSS to develop an individual level policy measure to determine mood indices by the level of media consumption or level of newspaper reading. Ellis and Faricy (2011) used the Stimson public policy mood

database to measure public opinion and social spending. The authors, using the thermostatic model of policy feedback, examined whether the public can recognize and respond to changes in direct and indirect spending for social and public health programs.

Survey research was used to conduct national opinion surveys to determine support for increased federal spending on social and public health programs. Barry and McGinty (2014) used a web-based survey to determine public support for policies and federal funding for mental health services. Faricy and Ellis (2014) examined differences in public attitudes toward direct and indirect government spending for social programs using a linear regression model Ellis and Faricy (2011); Faricy and Ellis researched the responsiveness of public opinion to education and social spending. The authors also examined the level of public opinion for federal spending on social programs based on direct and direct spending for specific programs. Blendon et al., (2010) retrieved data from 12 national opinion surveys conducted over a period of 10 years to examine the levels of American support for increased spending for public health. Using the GSS public spending attitudes data, Mortensen (2009) examined public attitudes towards federal spending in 12 budgetary categories covering 33 years.

Scholars have taken various approaches to examine public attitudes or policy mood towards federal spending levels for educational, social and public health programs (Blendon et al., 2010; Ellis & Faricy, 2011; Faricy & Ellis, 2014). Determining public support for specific social and public health programs facilitated the understanding of the impact of attitudes on funding the programs. This research also examined the relationship

of policy mood on public health appropriations and determined if there was an impact on funding levels.

Research Methods Using Regression Analysis

Approaches to examining budgetary changes within federal and state spending levels included the use of linear regression. Using a quantitative research design, Lantz, Alexander, Adolph, and Montgomery (2014) and Ryu (2011) used regression analysis designs in analyzing state spending levels and associated factors. Lantz et al. compared organizational structures associated with state government spending over 19 years examining Medicaid, public health, mental and human services spending levels, using a logistic and time-series regression model. While conducting an empirical analysis of analyzing 21 budget sub functions, Ryu determined various budget punctuations across government spending depended on the level of information processed by the House and Committee staff. Using time series regression analysis, Xinsheng et al. (2011) examined the influence of congressional attention by using climate indicators and climate science feedback as well as prominent internal events. Although the authors were not examining budgetary changes, they used two systematic time series indicators to examine the attention to climate change using regression analysis. Hegelich et al. (2015) and Ryu examined budget changes over time relative to multiple attention indicators and congressional attention and where these factors influence budget punctuations. Martin and Streams (2015) examined global public health spending to determine the degree of budget punctuations in global versus domestic spending. The studies that examined the

relevance of congressional attention, public opinion and budget punctuations highlighted the significant of these factors in contributing to the policy-making process.

Quantitative approaches to examining budgetary changes have included regression analysis in exploring associated factors with government spending. The use of regression analysis for examining the influence of organizational structures, information processing by the House and Senate Committees, and multiple attention indicators was vital in determining relationships to budget punctuations in government spending. I used regression analysis to examine the relationship between congressional attention and policy mood and to explore the existence of a relationship to federal public health appropriations.

Rationale for Selection of Variables

The rationale for the selection of the variables was based on the research questions to understand the level of congressional attention and public opinion as it influenced public health funding. The research question for this study was to explore congressional hearings regarding public health issues and the public's policy mood influence on federal public health appropriations. The hypothesis for this study stated if there was a relationship between the dependent variable of federal public health appropriations and the independent variables congressional hearings and policy mood. I tested each hypothesis with the independent variable, congressional hearing days and policy mood scores, separately with the dependent variable, federal public health appropriations.

Congressional Hearings

One of the most commons ways to influence the policy agenda is using congressional hearings. Congressional hearings allowed for new policy issues and perspectives to become part of the discussion regardless of previous attention given to the policy issue. According to Worsham and Stores (2012) who participated at hearings was as equally essential. According to Curtis and Wilson (2013) hearings served as a critical entry point for policy issues to receive increasing attention. Therefore, the ability to control congressional hearing agendas was significant in policymaking.

Scholars have measured congressional attention using congressional hearing data regarding policy issues within the policy process. A review of the literature found congressional hearing data has been used to determine the level of congressional attention given to a policy issue. Hegelich et al. (2015), Mortensen (2009), Pacheco and Boushey (2014), Xinsheng et al. (2011) agreed that the number of annual congressional hearing days could be used to determine the level of congressional attention to a policy issue or outcome. Mortensen and Hegelich et al. explored congressional hearing data as a measure relative to budgetary changes. Mortensen found popular issues were more likely to see budgetary changes with increased congressional attention, while Hegelich et al. found that congressional hearing data was used as a predictor of budget shifts over time within the subsystem of nuclear policy. Studies have used the number of congressional hearings to measure the level of attention of agenda items during a legislative session. Policy issues have included climate change and global warming, tobacco and vaccines (Givel, 2006; Pacheco & Bouchey, 2014; Xinsheng et al., 2011). Who holds hearings are also

important as to how much congressional attention a policy item received. Using hearing data within agriculture policy, Worsham and Stores 2012 analyzed congressional hearings data from the congressional record to compare the differences in congressional attention by the House and Senate. Congressional hearing data was relevant in predicting budgetary changes and levels of congressional attention.

Policy Mood

Measuring public mood was useful an estimating public engagement for specific policies. Given that, results of studies indicated public mood was relevant in understanding the level of support for social and public health policies that require sustained funding (Barry & McGinty, 2014; Blendon et al., 2010; Ellis & Faricy, 2011; Faricy & Ellis, 2014). Studies examining public opinion have used policy mood as a measure when considering factors influencing federal spending. Ellis and Faricy (2011) found that public mood was not responsive to the total amount of social spending, but on how the allocations are made relative to direct and indirect spending. A national public opinion survey examining increased spending on mental health treatment programs, revealed most Americans supported more government spending on mental health treatment. Furthermore, Faricy and Ellis (2014) examined the effects of public attitudes on policy framing on preferences for social spending and found the mechanism by which services and social benefits are delivered determines the level of citizens' support for programs, which provided such services and benefits.

Research conducted examining public attitudes indicates adequate support for public health spending. Blendon et al. (2006) examined Americans' health priorities in

respect to the importance of health care, views of national spending and health care, and the top general health concerns using public opinion surveys. Not only did Americans believe that federal public health spending should increase, but the findings also indicated that most Americans were happy with their local health departments. Blendon, et al. (2010) again explored Americans' attitudes about the public health system examining Americans' views on overall spending and public health. The authors found that Americans supported an increase in federal spending on public health programs. Also, Mortensen (2009) examined public spending attitudes relative to budgetary changes in federal health spending levels. Findings were consistent that public opinion did matter to public policies. Policy mood was an indicator of the public attitudes towards the government's spending priorities.

Federal Public Health Appropriations

Within the congressional appropriations process, appropriations are directed annually for federal programs. Within the scholarly literature, appropriations were identified as being used for characterizing budgetary outcomes. Robinson and Caver (2006) tested hypotheses related to PET using congressional appropriations to explain the reform of congressional policymaking in the 1970s. Anderson and Harbridge (2010) examined the appropriations of the annual federal budget process to the extent that the decision-making process was based on incrementalism. Woon and Anderson (2012) examined factors, which affect the duration of political bargaining and determined whether appropriations was delayed due to these factors. Rhee (2014) examined the relationship between performance information and appropriations and found that the

Program Assessment Rating Tool had a minor impact on congressional appropriations due to reflecting a politicized tool. Congressional appropriations served as a relevant variable for determining policy punctuations within federal public health funding levels.

The variables, congressional hearings and policy mood, are appropriate for examining the relationship between external factors and federal public health funding. Congressional hearings are a meaningful measure of congressional attention (Curtis & Wilson, 2013). Congressional committees conduct hearings negotiating levels of federal public health funding for agencies. During these committee hearings, funding levels could increase or decrease as committee members consider agencies' budget recommendations for the upcoming fiscal year (Tollestrup, 2014). Relative to policy mood, public attitudes are included in measuring society's interest in federal public health funding levels. Support for increasing or decreasing funding levels could fluctuate based on the necessity of funding during times of public health stability or outbreaks. However, research was limited related to examining a relationship between the variables and the strength of the relationship. This study enhanced the budgetary literature by exploring the relationship between federal public health funding and the external factors of congressional hearings and policy.

Summary

The PET has addressed policy and budget changes within the policy process. Political factors within the federal and congressional budget process influence financing within the public health system. Studies have examined budgetary changes across budget functions in federal and state budgets (Breunig & Koski, 2006; Liang & Fiorino, 2013;

Martin & Streams, 2015; Mortensen, 2009; Robinson & Caver, 2006; Ryu, 2011). However, identifying specific factors attributing to these changes has been challenging. Studies indicating methodological approaches to examining budgetary changes in state and federal spending, the authors sought to explain the factors that influenced budget punctuation (Hegelich et al., 2015; Mortensen, 2009; Ryu, 2011). Given that federal public health spending was essential in funding the mechanisms that support state and local public health programs within the public health system.

Although there was limited research on congressional attention relative to federal public health spending, congressional attention has been studied to examine its relevance to policy issues encompassing public spending. Mortensen (2009) examined federal spending data relative to congressional attention and found that popular issues benefited from an increase in congressional attention whereas unpopular issues benefited from decreasing congressional attention. Xinsheng et al. (2011), found that by examining global climate change issues, attention-grabbing factors such as media coverage generally promoted issue salience; however, these factors may work differently across various agenda venues. Relative to policy punctuations and congressional attention, Hegelich et al. (2015) found that budget changes could be predicted, though, weak, by using congressional attention as a predictor. As a result of the literature review, I found limited research focused on congressional attention and its impact on federal public health spending.

In addition to the limited research examining congressional attention influencing budgetary changes in federal public health appropriations, the literature review also found

limited research on policy mood affecting federal public health spending. However, comparative to social spending, research indicated public opinion was not responsive to the total amount of social spending, but on how the allocations are made based on direct and indirect spending (Ellis & Faricy, 2011). Although public opinion was significant in support of increased spending for public health resources at the local and community level, consideration of its significance for federal public health spending needs further examination. Previous research has examined factors, such as congressional attention, public attitudes, organizational changes, research, and development, which influence federal and state spending levels. However, for my study, I explored how congressional attention and policy mood influence appropriated funding levels for public health.

In Chapter 3, I will describe the research design and methodological approach used to conduct my study. Chapter 3 also describes the data collection procedures and the data analysis plan for examining congressional attention and policy mood influence on changes in public health appropriations. In this chapter, I will also highlight the statistical assumptions that will be tested that could affect the results of my study, as well as threats to validity, and ethical concerns.

Chapter 3: Research Method

Introduction

The purpose of this study was to understand how the theory of policy punctuations helps explain federal public health spending levels. In this study, I used the quantitative method to examine the relationship between congressional hearings and policy mood (i.e., the independent variables) and the policy outcome of federal public health appropriation (i.e., the dependent variable). A linear regression statistical method was used to examine the influence of congressional hearings and policy mood on the changes in the level of federal public health appropriations. I focused this study on budgetary changes in federal public health spending since 1947. This study was conducted with the expectation that budgetary changes could occur because of specific external factors within the budget environment.

In Chapter 3, I will describe the quantitative research method employed in this study to examine the influence of congressional hearings and policy mood on the policy outcome of federal public health appropriation. I will discuss the rationale for choosing the research method and design. In addition, this chapter will include a description of the methodology employed for this study including ethical considerations as they related to the retrieval of secondary data. This chapter will also include a description of the secondary data sources, the process of data collection and analysis, the statistical assumptions for the study, and an explanation of the threats to validity.

Research Design and Rationale

Research Question

Using the quantitative research approach, I addressed the following research question: How have congressional attention regarding public health issues and the public's policy mood influenced a change in the level of public health appropriations since 1947? The dependent variable in this study was federal public health appropriation, and the independent variables were congressional attention and policy mood. This study did not include covariates or control variates, so I did not examine whether there was a relationship between policy mood and congressional attention and any other variable.

Research Hypothesis

The hypotheses for this study were:

$H_0$1: There was no relationship between the change in the level of federal public health appropriations and congressional hearings focusing on public health issues.

H_a1: There was a relationship between the change in the level of federal public health appropriations and congressional hearings focusing on public health issues.

$H_0$2: There was no relationship between the change in the level of federal public health appropriations and policy mood focusing on public health attitudes.

H_a2: There was a relationship between the change in the level of federal public health appropriations and policy mood focusing on public health attitudes.

The purpose of this study was to understand the theory of policy punctuations as it relates to federal public health spending levels (i.e., appropriation). In this study, I employed a quantitative method using time series data in a linear regression design. I

examined the influence of congressional hearing days and policy mood scores on changes in the level of federal public health budget authority. The dependent variable, appropriations, was the amount of fiscal year funding authorized by Congress, which also served as the policy outcome. One of the two independent variables, congressional attention, was defined by congressional hearing days. The second independent variable, policy mood, defined the public's attitude towards a specific policy issue using policy mood scores.

Using the secondary data set from the PAP (2015), I retrieved the congressional hearing days, policy mood scores, and budget authority. Congressional hearing data were appropriate for examining the level of congressional attention given to policy issues because empirical studies have previously examined congressional attention for federal spending (Hegelich et al., 2015; Mortensen, 2009). Finally, according to Anderson and Harbridge (2010), the use of appropriations as a budgetary outcome was appropriate for analyzing budgetary changes in federal spending.

Quantitative research approaches have been used to test the theory of policy punctuation and to explain policy and budget punctuations. Mortensen (2009) and Hegelich et al. (2015) used a quantitative approach to test PET by examining budgetary distributional changes in federal spending due to congressional attention. Worsham and Stores (2012) focused on how policy punctuations appear within a federal subsystem of agriculture using a quantitative approach; consequently, quantitative research has also been used to determine relationships between factors and public health funding. Mays and Smith (2009) examined the associations between health resources, population

characteristics, and public health agency spending, while Santerre (2009) used multiple regression to isolate the relationship between population and public health spending controlling for other factors known to influence public health spending levels. Finally, Barry and McGinty (2014) examined how political affiliation of respondents influence support for federal mental health spending.

Relevance to Congressional Attention and Policy Mood

For my study, I considered a qualitative and quantitative research method approach. The qualitative research method is a type of research used when assessing attitudes and trends among a population or variable (Creswell, 2009). This method is conducted using a deductive research approach by basing the research on a prior study pursuing additional information (Creswell, 2009). Therefore, the qualitative method was not appropriate since the purpose of this study was not to assess additional information through an inductive research process, which involves the search for themes among the variables (Creswell, 2009).

Conducting the quantitative research method has several advantages compared to using the qualitative approach. First, the quantitative approach allowed me to focus on trends and detect policy punctuations within a budget period in this study. Martin and Streams (2015) used a quantitative research design to examine distributions of spending variables of global health commitments over 19 years to determine evidence of punctuations. Over a period of 18 budget years, Robinson et al. (2014) assessed the role of organizational changes and punctuated budgetary changes. Breunig and Koski (2012) examined budgetary trends over 25 years to determine the difference of states with less or

more punctuated budgets. Ryu (2011) considered budget periods over 16 years examining specific factors that influenced budget punctuations differently depending on the nature of the programs in question. Secondly, I identified variables from the beginning of this study, rather than through a process of data collection focusing on a concept or phenomenon. Finally, the variables of congressional attention and policy mood were related to the research question and allowed for a systematic approach to determine the association of the factors to federal public health spending. Choosing the quantitative research design for examining the factors that influence federal public health funding levels was well established within the policy field and have been previously used to advance knowledge within the field of public health policy.

In this study, I used a linear regression design to examine congressional attention and policy mood relative to federal public health appropriation during fiscal years since 1947. Regression analysis has been used to identify factors that influenced the level of government spending as well as public health spending (Faricy & Ellis, 2014; Franklin, 2002; Mays & Smith, 2009; Rhee, 2014; Santerre, 2009; Stegner & Fort, 1995). Therefore, regression analysis was appropriate for this study pursuing effects that can be drawn between congressional attention and federal public health appropriations. In addition, regression analysis allowed for determining the strength of relationships between the independent and dependent variables.

The experimental and pre-experimental designs were not suitable for this study. These two designs would have been useful if the purpose of my study was to identify or make a causal inference between the two variables of congressional attention and public

health budget authority. The purpose of this study was to identify a correlation between public health budget authority and congressional attention, not to identify a causal inference between the variables. However, using the quasi-experimental design as regression was useful in determining whether some linkage existed between the variables. The experimental design presents challenges in controlling intrinsic factors, such as historical events (Frank-Nachmias & Nachmias, 2008). For this study, an historical event would affect the responses of those persons specifying the level of public health funding allocated by the federal government. This factor was controlled using the quasi-experimental design (see Frankfort-Nachmias & Nachmias, 2008).

This study design that I used based on the research question presented challenges relative to time and resources. Due to time constraints, the analysis of federal public health funding was limited to the discretionary funding that supports the U.S. Public Health Service of the U. S. Department of Health and Human Services. Other funding that could have been included, such as transfers from other agencies and some mandatory funding, was not due to the variation in how transfers occurred during a federal budget year. Other mandatory funding related to Medicare and Medicaid was excluded, since this study focused on federal public health discretionary funding. Although, I could have examined each federal agency's appropriation separately, due to time constraints, I used the appropriations for the USPHSA that was captured within the PAP data. The benefit of using the PAP secondary data source for budget authority and congressional hearings was that it allowed me to examine examining congressional hearings data over a 60-year period with coded data for health-related issues along with the budget authority for the

given fiscal year. This reduced the time to review congressional hearing information and extracting information related to health issues.

Methodology

Population

The target population for this study consisted of the annual federal public health appropriations, congressional hearings data, and the policy mood data. Federal public health appropriations for this study were defined as federal public heath funding appropriated to the federal public health agencies during the period of 1947 through 2015. I identified the annual appropriation for federal agencies through several avenues. Recommendations for federal agency appropriations can be found in congressional report language documented by the House and Senate Appropriation Subcommittees. In addition, agency annual appropriation levels can be found on the OMB website. The OMB maintains a database of historical budget authority for federal departments and agencies. I identified federal public health funding from the PAP database, which maintains coded appropriation levels from OMB for research studies.

Although, I used the entire data set as the population for this study, calculating the power analysis and sample size was useful to ensure the data set was adequate for determining statistically significant results. Power analysis is the process used to examine the null hypothesis and determine if the null hypothesis was rejected and the alternative hypothesis was accepted (Sink & Mvududu, 2010) Power analysis includes identifying the effect size and the power level (See Sink & Myududu, 2010). The data set included appropriation years from 1947 to 2015; therefore, I had 68 years of annual

appropriation history data. Determining the sample size consisted of including the margin of error I was willing to accept and the confidence level needed within the sample. Using Raosoft (2004) to calculate the sample size, I used a 5% margin of error and a confidence level of 95% with a population size of 68. The minimum recommended sample size was 58 for my study to have statistically significant results. I used the whole data set of 68 years to ensure that my statistical results were valid for this study.

Data Collection

Policy Agenda Project (PAP)

The secondary data source used for this study was the PAP. I retrieved congressional hearing, policy mood, and public health appropriation budget data from the PAP. The PAP, publicly available, provides a database of congressional hearings, public laws, roll calls, and other political activity. There were no necessary permissions to obtain the data sets for this study,

Congressional hearings data. The congressional hearings data set tabulated all congressional hearings from the House and Senate according to a "single substantive policy areas," including health (PAP, 2015, p. 3). Congressional hearing data were copied from the hearing sections of the annual Congressional Information Services: Abstracts of Congressional Publications and Legislative History Citations (Library of Congress, ND). The database also supplemented information from the ProQuest Congressional Database of Congress (Library of Congress, ND). Several studies have used congressional hearing data from the PAP to determine the level of congressional attention (Hegelich et al., 2015; Mortensen, 2009; Pacheco & Boushey, 2014). Although the database included

other legislative materials, such as congressional reports, the focus on congressional hearings made this database an appropriate source for this study.

The PAP provided a specific coding system to identify each hearing topic by policy content, along with other variables of interest within a committee. Hearings were coded based on a topic scheme for policy content with each entry assigned one content code. See Appendix A for a list of the hearing codes used in this study. Each entry was coded into one of 20 major topics such as Civil Rights, Health, and Agriculture. The 220 subtopics were coded, for example, as age discrimination, prevention, communicable diseases and health promotion, and food inspection and safety. The coding scheme was appropriate for this study to identify those congressional committees scheduling hearings associated with a public health topic. Furthermore, using this coding scheme, I had the capability of tracing public health topics across the specific congressional years (Mortensen, 2009; Pacheco & Boushey, 2014).

Policy mood data. The PAP (2014) also maintained a database of policy specific moods data to provide researchers with policy specific mood measures. By generating longitudinal measures from the GSS survey data, public opinions were captured across specific policy domains. Through the policy moods database, each survey item was matched with a policy code from the PAP coding scheme. Given that, the coding scheme was consistent with the congressional hearings data allowing for comparison between the two variables.

Within each of the estimated series, the PAP provided information related to the number of surveys used in the estimate, the total number of administrations of each

survey item, and the represented time period. Full question wording for each survey item was available in the codebook. The policy mood data was retrieved from Policy Codes 300-399 and Policy Code 107. Policy Codes 300s were health related while Policy Code 107 was related to taxation. Policy Code 107 was added to the data set to increase the population of the data set to 1947, which ended at 1956 with the health-related policy codes. Also, adding Policy Code 107 increased the sample size to allow for the results to be statistically significant. Policy Code 301 referred to a health tax while Policy Code 107 represented a question referring to overall taxation of who pays more in taxes. The wording for each question for the variables is listed in Appendix B. Having the full question wording I could confirm the topic area, such as health, which was being measured for policy mood and to review the wording for bias.

Appropriations data. The PAP also maintained a database of annual budget appropriations data based on the Budget of the United States Government (OMB, 2016). As specified by the OMB, the data was organized by budget functions and sub functions, representing the long-term purposes of the appropriations. Within the database, federal public health budget authority was obtained under the function "550– Health". The comprehensive appropriation budget database was adjusted for inflation using the OMB deflator for fiscal year 2009 (OMB, 2016).

The coding of the appropriations data were coded similar to the congressional hearing data by function. Therefore, the data were coded according to the purpose of the funding and cross-walked with the congressional hearing coding data. According to Ellis and Faricy (2011) and Mortensen (2009), the database of budget authority was

appropriate for identifying trends and punctuations among federal appropriation fiscal years. Since the PAP data were publicly available, there were no required permissions to access the data. Also, no historical or legal documents were directly used as a source of data.

Operationalization

As previously stated, to examine the influence between congressional attention, policy mood and federal public health funding in the study, I retrieved data from the PAP data on U.S. congressional hearings, policy specific moods data, and changes in annual budget appropriations. The variables for the study were operationalized to the level of the unit of analysis. The units of analysis for this study included annual changes in federal public health appropriations levels, number of congressional hearing days and collective responses, calculated as policy mood scores, regarding attitudes towards federal public health spending.

Congressional hearings. Congressional hearings allow for new policy issues and perspectives to become part of the discussion regardless of previous attention given to the policy issue. The House and Senate Appropriation Committees schedule congressional hearings. Congressional hearing data related to public health activities were retrieved and downloaded from the PAP database of congressional hearings. Congressional hearings were coded by major and subtopics with a topic description. To create a measure for public health congressional hearing data, I retrieved the hearing data from the Category 3- Health. From this category, I combined subtopic codes for hearing data from general health; prevention, communicable diseases and health promotion; infants and children;

mental illness; tobacco abuse; and alcohol. In Appendix A is a list of codes, along with specific examples of hearing data, specified within each of the subtopic health areas. From each of the subtopic areas based on the codes, I identified and added the number of hearing days occurring within the public health subtopic areas, therefore, making the hearing variable continuous.

Public policy mood. Policy mood is an aggregate measure of public opinion that describes the public views towards policy choices made by the government. This measure of public opinion is interpreted as being liberal or conservative towards these policy choices. The policy mood data were retrieved and downloaded from the PAP base of mood data, which were publicly available on the PAP website. The data set provided a numerical policy mood score. These variables represented responses from a cross-section of the general population's mood towards health and public health funding. The specific wording for each variable is listed in Appendix B. The PAP offers a query tool that aggregated the responses from the variables and provided a calculated score for the specific mood. The average response was interpreted as a liberal and or conservative mood towards health and public health funding.

Federal public health appropriations. Within the congressional appropriations process, appropriations or funding are directed annually for federal programs. Public health appropriation budget data were also drawn from the PAP data base for budget authority. To create the public health appropriation budget measure, I retrieved budget data from the sub budget function categories from fiscal years 1947-2015. The PAP adjusts the funding amounts in the database and accounts for inflation using the OMB

deflator (1.000) for fiscal year 2009. As stated before, the PAP database included budget authority data for the 550-Health funding category. The focus of this study was to analyze public health funding from federal agencies designated as components of the U.S. Public Health Service. These agencies are funded primarily with annual discretionary appropriations. Therefore, I filtered the data to retrieve discretionary funding amounts that captured much of the public health funding from the health category. The percentage change in the level of budget authority was calculated to create the appropriation measure.

Data Analysis Plan

The data analysis was structured to answer the research question: How have congressional hearings regarding public health issues and the public's policy mood influence federal public health appropriations since 1947? The data analysis plan the study included the descriptive analysis, identifying and testing assumptions and calculating statistical tests that were performed to accept or reject the null hypothesis. Analysis of the data was conducted using SPSS Version 24.

Overall, appropriation levels in the PAP data sets were retrieved from the OMB and have already been analyzed for accuracy. The data sets were retrieved from the PAP website in excel spreadsheets and converted for usage to SPSS. Before analyzing the data, the data sets were reviewed for missing data. Frequency distributions on each variable was performed to determine if there were missing data of more than 5 percent for each variable (Holmes, 2014) Descriptive statistics were conducted on congressional hearing and policy mood data for the means, standard deviations and ranges. Also,

descriptive analysis was employed to show fluctuations in the level of public health appropriations over the 30-year period (Byrne, 2017). The review of the data sets through frequency distributions and descriptive statistics provided a depiction of the quantity and accuracy of the data.

Linear regression was used to analyze the data in this study. Prior to analyzing the data, seven underlying assumptions were identified that affected the results of this study. The first 2 assumptions were based on the variables in the quantitative research design of the study:

1. Assumption #1 states that one dependent variable was measured at the continuous level (Laerd Statistics, 2015).
2. Assumption #2 states that the independent variable was also measured at the continuous level (Laerd Statistics, 2015). Both assumptions were analyzed through reviewing the variables of the data set to ensure the variables are of a continuous level.
3. Assumption #3 states there needs to be a linear relationship between the dependent and independent variables (Nishishiba, Jones & Kraner, 2017. Using SPSS, two individual scatterplots were created and visually inspected for each of the dependent and independent variables of public health appropriations against each independent variable congressional hearings days and policy mood.

The remaining four assumptions were tested running the linear regression in SPSS.

4. Assumption #4 states there needs to be an independence of observations or errors (Field, 2013). This assumption was tested by evaluating the Durbin-Watson statistic, which was found in the linear regression results. An acceptable value of approximately 2 indicates there was no correlation between the residuals. A value greater than 2 indicates a negative correlation between adjacent residuals, whereas a value of 2 indicates a positive correlation (Field, 2013).
5. Assumption #5 states there should be no significant outliers (Laerd Statistics, 2015). The approach taken to identify outliers was performed using the casewise diagnostics. The casewise diagnostics highlights any observations with standardized residual of greater than $\pm$ 3 standard deviations, which SPSS treats as an outlier (Laerd Statistics, 2015).
6. Assumption #6 states that the data needs to show homoscedasticity (Lewis-Beck, 2011). Violating the third assumption of homoskedasticity was more critical considering violating this assumption leads to incorrect significant tests and confidence intervals (Lewis-Beck, 2011). For homoskedasticity, the independent variables of congressional hearing and policy mood should remain constant across the dependent variable of federal public health appropriations. This assumption was tested by the visual inspection of a scatterplot of the regression standardized residual values against the regression standardized predicted values.

7. Assumption #7 states that the residuals (errors) of the regression line are approximately normally distributed (Nishishiba et al., 2017). To test this assumption, I performed two graphical measures, a histogram of the standardized residuals and a normal probability plot (*Normal P-Plot*,) to assess the normal distribution of the residuals of the regression line.

I used a bivariate linear regression analysis to examine the relationship between the independent variables of congressional attention, policy mood and the dependent variable of federal public health appropriations. Covariates were not included in the statistical analysis. The bivariate linear regression analysis determined if a relationship existed between the change in federal public health appropriations and the factors of congressional attention and policy mood.

Each hypothesis was tested separately with the dependent variable of federal public health appropriations. To test the first hypotheses on congressional hearings, I conducted a significance test to evaluate if congressional hearings predict levels in federal public health appropriations. Testing whether to accept the null hypothesis depended on the population correlation coefficient, which represented the population slope in the regression line. When the population coefficient was zero, then a unit change in the value of the congressional hearings (X) resulted in no change in the federal appropriations variable (Y). To evaluate whether to accept or reject the null hypothesis, I conducted the t-test for significance and calculated the *p*-value. (Nishishiba et al., 2017). If the result of the *t*-test was significant, with a p-value below .05, then the null hypothesis was rejected. By rejecting the null hypothesis, the independent variable of

congressional hearings significantly contributed to the value of the change in federal public health appropriations. The second hypothesis for the policy mood variable was tested using the same statistical procedure.

To calculate the bivariate linear regression analysis for congressional hearings and the change in federal public health appropriations using SPSS, regression was selected under the analyze menu and the variables of federal public health appropriations and congressional hearing days were entered in the dependent and independent variable boxes, respectively. By choosing statistics and descriptive, this allowed for multiple tables in the output including descriptive statistics of the variables in the analysis. The results also provided the R^2 which indicated the strength of the linear relationship between the change in federal public health appropriations and congressional hearing days. Results were interpreted based on the confidence intervals, the significance of the *t* test, and the degree of correlations coefficients.

Threats to Validity

The two types of threats to validity are external and internal threats. Balancing these types of threats presented a challenge in research design. In this section an explanation of each of the threats, how the threats impacted this study, and how the threats were addressed in this study.

External validity refers to the quality of the research design in that the results are generalizable to other settings (Miller & Salkind, 2011). The importance of generalizing findings to a larger population was to ensure that the findings can be of benefit to many individuals and not just a few persons (Leighton, 2012). In this study, generalization of

the effects of congressional hearings and policy mood on federal public health funding can be a threat to external validity due to the interaction of history and the specificity of the variables. The results of this study were based on a specific time period, which the congressional hearing days focused on public health issues and policy mood scores specific to public attitudes towards the nation's spending on public health. Therefore, the results cannot be generalized to past or future situations. According to Creswell (2009), to address this threat, this study should be replicated later to determine if the same results occur as in the earlier study. However, the generalization issue was addressed by the deliberate sampling of the sub set of congressional hearings and policy mood data from 1947 to 2015. Therefore, the effect of these factors on federal public health funding was meaningful for this study (Leighton, 2012).

Internal validity refers to the accuracy of concluding a causal relationship between the independent and dependent variables. According to Leighton (2012), this causal relationship could be migrated by a third variable not included in this study, therefore resulting in a false positive. In the federal public health appropriation study, a threat to internal validity was history. History affects this study due to events occurring that can influence the outcome beyond what was occurring. As time passed, events occurred within the budget process that influenced the outcome. Legislation, which resulted in sequestration, can have an impact on funding levels that may not be relevant to congressional attention or public attitudes toward public health funding levels (Redhead et al., 2014). Advocates for public health funding attend congressional hearings to impact the outcome for federal public appropriation (Henry, 2011). This threat was

addressed by ensuring that both independent variables were tested during the same budget periods. Furthermore, in this study, I did not explore a causal relationship between the predictive factors of congressional hearings and policy mood to federal public health appropriation but examined the relationship between the variables. Statistical regression, also known as regression to the mean, is a statistical phenomenon that occurs between two variables of interest selected nonrandomly from a population and are imperfectly correlated. According to Chen and Chen (2012), the smaller the correlation between the two variables, the more extreme the population mean value, and the larger the effect of statistical regression. Statistical regression did not depend on the linearity assumption; thus, internal validity was a threat when statistical regression was ignored (Sweeney, 2011). Computing the correlation coefficient addressed this threat to internal validity.

Statistical conclusion validity refers to the degree in which the conclusions made about the null hypothesis was correct. This Type II error occurs due to inadequate statistical power or the violation of assumption. This threat to validity was important because it also referred to whether a relationship existed between the two variables, congressional hearing days and changes in federal public health funding (Petrocelli, 2012). To address this threat to validity, a regression analysis was chosen for this study rather than an analysis of variance test.

Ethical Procedures

Ethical considerations, such as confidentiality, data storage, and conflict of interest was addressed conducting research using secondary data. The PAP data sets, as the secondary data source for this study, were publicly available. Data restrictions or

permissions were not required. These restrictions were not applicable to the appropriation levels and coding data on congressional hearings which was publicly available. Data were analyzed as aggregated information, therefore, protecting respondent's identity. Regarding the policy mood data, the data set retrieved from the PAP website was generated using the GSS survey. According to NORC (2016), the data was stripped of identifying information for the respondents. Data was aggregated from data sets on the PAP website, and there was no individual information that was be downloaded.

Data files were stored according to protocol and Institutional Review Board (IRB) approval was obtained to conduct this study. All files and data sets were stored on a personal computer with password protection and encrypted files. All data files were deleted from the computer once this study was completed, and the dissertation was approved by Walden University. Walden IRB approval was obtained before beginning data collection procedures. All ethical concerns from the IRB were addressed.

Summary

In this chapter, I presented the details of the quantitative methodology I employed in examining the impacts the factors of congressional attention and policy mood had on changes in federal public health appropriations. I described the research design that was employed and the rational for using such as design. The time and constraints of using the research design were documented specifying the use of secondary data. The methodology for the study was described highlighting the data collection procedures for the variables, and the data analysis plan explained the statistical tests used to examine the hypotheses. Internal and external threats to the validity of this study were outlined along with

addressing these threats. Finally, the ethical procedures were identified and the relevance to this study. In Chapter 4, I will explain the statistical analysis and the research findings for this study.

Chapter 4: Results

Introduction

In Chapter 4, I will focus on the data collection process and the results of the study. The chapter will also include an overview of the data, an analysis of whether statistical assumptions were met, and the statistical analysis used to examine the hypotheses. The purpose of this study was to understand policy punctuations as they relate to federal public health appropriation levels. I used the bivariate linear regression analysis to examine the relationship between congressional attention and policy mood and federal public health appropriation. In this study, I addressed the following research question: How have congressional attention regarding public health issues and the public's policy mood influenced the change in the level of public health appropriations since 1947?

The hypotheses for this study were:

$H_0$1: There was no relationship between the change in the level of federal public health appropriations and congressional hearings focusing on public health issues.

H_a1: There was a relationship between the change in the level of federal public health appropriations t and congressional hearings focusing on public health issues.

$H_0$2: There was no relationship between the change in the level of federal public health appropriations and policy mood focusing on public health attitudes.

H_a2: There was a relationship between the change in the level of federal public health appropriations and policy mood focusing on public health attitudes.

Data Collection

In this study, I used secondary data retrieved from the PAP. After obtaining IRB approval, I initiated the data collection process. The IRB Approval is #05-14-18-0306258.

At the beginning of the data collection process, I drew the sample of years from 1947–2015 from the PAP population file and the sample data set were retrieved as an Excel spreadsheet. I retrieved 68 years of budget authority, congressional hearings days, and policy mood scores. A sample size of 58 years for each of the variables was determined based on using Raosoft (2004) to calculate the sample size with a 0.05 significance level and a 95% confidence level to have statistically significant results. However, using the larger sample size of 68 years allowed me to consider my results to be statistically significant.

For the dependent variable, I calculated the percentage change in appropriation level from each fiscal year for the public health appropriation variable. Congressional hearing days were totaled for each fiscal year for House and Senate committees. Major committees included House Appropriations, Budget and Oversight, and Government Reform along with Senate Appropriations and Health, Education, Labor, and Pensions. Please see Appendix C for a complete list of committees. I used policy mood scores as downloaded in the data set for the respective study years of 1947 to 2015. All health-related policy mood scores were retrieved from 1956 to 2015. Policy mood scores related to taxation were pulled from 1957 to 1948. Once the data were manipulated as needed for Excel, I imported the data into SPSS Version 24 for analysis.

Results

Statistical Assumptions

Before conducting the analysis, I identified seven statistical assumptions that could affect the results of this study. The first two assumptions were based on the variables in the quantitative research design of the study. The study met the first two assumptions of having a continuous independent variable and a continuous dependent variable. Assumption #1 stated that one dependent variable was measured at the continuous level (Laerd Statistics, 2015). The dependent variable of public health appropriation was measured at the budget authority level, which was a continuous variable. Assumption #2 states that the independent variable was also measured at the continuous level (Laerd Statistics, 2015). The independent variable, congressional attention, was measured by congressional hearing days, which was a continuous variable. In addition, the other independent variable, policy mood, was measured using scores from 0 to 100, making it a continuous variable.

Assumption #3 states there needs to be a linear relationship between the dependent and independent variables (see Nishishiba et al., 2017) Using SPSS, I created two individual scatterplots of public health appropriations against each independent variable. A visual inspection of the scatterplots determined if a linear relationship existed between appropriations and congressional hearings, and a linear relationship between appropriations and policy mood. After visually inspecting the scatterplots, I concluded there that there was a linear relationship between public health appropriations and

congressional hearings days and a linear relationship between public health appropriations and policy mood.

I tested the remaining four assumptions by running linear regressions in SPSS. These assumptions required the evaluation of the residuals, which can only be calculated by processing the linear regression. Assumption #4 states there needs to be an independence of observations or errors (Field, 2013). This assumption was met by evaluating the Durbin-Watson statistic, which was found in the linear regression results. The Durbin-Watson statistic for the congressional hearing data was 1.888 and for policy mood was 1.867. The range for the Durbin Watson was 0 to 4. An acceptable value of approximately 2 indicates there was no correlation between the residuals. A value greater than 2 indicates a negative correlation between adjacent residuals, whereas a value of 2 indicates a positive correlation (Field, 2013). The Durbin-Watson values for congressional hearings days and policy mood scores were close to an acceptable value of 2. There was independence of residuals, as assessed by a Durbin-Watson statistic of 1.888 and 1.867.

Assumption #5 states there should be no significant outliers (Laerd Statistics, 2015). Outliers were an important issue because of the occurrence of incremental and non-incremental budget changes. For this study, outliers were defined as budget changes exceeding 50%, which could be abnormal (see Rhee, 2014). The PET seeks to explain these budget changes that occur within the budget and policy process consisting of periods of policy stasis and periods consisting of large-scale policy changes (CITE). Incremental budget changes normally occur within the federal appropriations process,

usually occurring between 5% and 20% between fiscal years (CITE). Non incremental budget changes occur during increases supporting specific policy changes (CITE). Also, given that some of the punctuated budget changes were due to an influx of federal funds to strengthen public health budget authority, these outliers were relevant to the study.

The approach taken to identify outliers was performed using the casewise diagnostics. The casewise diagnostics highlighted any observations with a standardized residual greater than $\pm$ 3 standard deviations, which SPSS treats as an outlier (Laerd Statistics, 2015). I identified three outliers for public health appropriation for fiscal years 1950: 77.62 (std. residual-3.160), 1965: 91.18 std. residual-3.669), and 1967: 80.59 (std. residual- 3.183). In 1950, the budget change of 77.62% was based on the new obligation for promotion of public health and resulted in an influx of funds. In 1965, this budget category increased due to the influx of administrative funds through a new obligation authority. In 1967, the reconstruction of the budget line for both federal funds and trust funds resulted in an abnormal budget change. These significant budget changes, though outliers, were included in the study. The outliers were necessary and appropriate for my study to maintain an adequate sample size for statistical significance.

Assumption #6 states that the data needs to show homoscedasticity (Lewis-Beck, 2011). I tested this assumption by the inspection of a plot of the regression standardized residual values again the regression standardized predict values. Individual scatterplots were performed for each independent variable (i.e., the regression standardized predicted value) against the dependent variable (i.e., the regression standardized residual). Visually inspecting the scatterplots of standardized residual and predicted value, I determined

whether the points representing the public health appropriation (regression standardized residual on the y-axis) constantly spread across the fitted values of the congressional hearing days (regression standardized predicted value on the x- axis). The residuals in the scatterplot appeared to spread randomly across the axis, although there were a few more points on the left of the scatterplot. I repeated the standardized residual and predicted value scatterplot for policy mood and public health appropriation and found the residuals to spread across the fitted values of the policy mood scores. There was homoscedasticity as assessed by visual inspection of a plot of standardized residuals versus standardized predicted values; therefore, this assumption was met.

Assumption #7 states that the residuals (i.e., errors) of the regression line are approximately normally distributed (Nishishiba et al., 2017). To test this assumption, I performed two graphical measures: a histogram of the standardized residuals and a normal probability plot to assess the normal distribution of the residuals of the regression line. These options were available when I conducted the linear regression in SPSS. By visually inspecting the histogram, the standardized residuals appeared to be approximately normally distributed for the dependent and independent variables. The histogram for the dependent variable of public health appropriations and the independent variable for congressional hearings days, the mean was-1.62E-16 and the *SD* = 0.993. The mean and standard deviation should have values of a mean of approximately 0 (zero) and *SD* = 1 for a strict alignment of the points along the diagonal line.

To confirm normality based on the visual inspection of the histogram, I also produced the normal *p*-plot. Visual inspection of the normal *p*-plot determined if the

residuals were normally distributed aligning along the diagonal line. Although the desire was to have the points perfectly aligned along the diagonal line, I expected for the residuals to be approximately normally distributed. Based on the normal *p*-plot, the points were aligned close enough to indicate the residuals ae normally distributed for congressional hearings days (see Laerd Statistics, 2015). I repeated the production of the histogram and the normal p-plot for policy mood as the independent variable. The *M* = 3.49-16 and *SD* = 0.993. For policy mood, the mean was farther from 0 and the standard deviation was closer to 1. The normal -plot displays a distribution of points alignment indicating normally distribution for policy mood scores. Therefore, residuals for the dependent variable for appropriation and the independent variables of congressional hearings days and policy mood scores were normally distributed as assessed by visual inspection of a normal probability plot.

In summary, this study included seven statistical assumptions that needed to be met by the congressional hearings days and policy mood regression models before I could analyze the data. Six of the assumptions were met and one was not met. Both regression models met the first two assumptions of continuous independent and dependent variables. The remaining five assumptions related to my data were tested by using SPSS. Assumptions #3, #4, #6 and #7 were met. Assumption #3 was met by both regression models by producing individual scatterplots confirming a linear relationship between public health appropriations and congressional hearings days and public health appropriations and policy mood. Assumption #4 was met for both regression models by meeting a value of being closer to 2 for the Durbin-Watson statistic. The assumption of

homoscedasticity was met by both regression models by visually assessing a scatterplot of standardized residuals versus standardized predicted values for public health appropriations and congressional hearings, and a separate scatterplot of standardized residuals versus standardized predicted values for public health appropriations and policy mood. The assumption of the normal distribution of residuals (i.e., errors) of the regression line was met by assessing the histogram and normal *p*-plot. Both models, congressional hearings and policy mood, met this assumption. Both models displayed stronger among the normal *p*-plot. The assumption of significant outliers was not met by both regression models due to outliers for public health appropriations. Three outliers that exhibited more than a 50% budget change between fiscal years were included in the study due to their relevancy to the budget punctuation theory. Also, the purpose of the study was to determine if there was a relationship between public health appropriation and external factors and an adequate sample size was needed for statistical significance. After meeting all the assumptions except for one, I conducted the analysis and interpretation of the data.

Descriptive Statistics

Table 1

Descriptive Statistics

Variables	*n*	*Min*	*Max*	*M*	*SD*
Public health appropriations	68	-30.12	91.18	10.66	21.54
Congressional hearing days	68	1	185	54.47	39.85
Policy mood	68	.60	.80	.70	.039

Table 1 indicates the descriptive statistics for the study. The number of observations for public health appropriations was 68 since the budget change was calculated for the current year using prior year amounts. Overall, the average percentage change in budget authority was appropriated at over 10.66% (*SD*=21.54 %.). The mean for congressional hearings days was at 54 days (*SD*=39.85) and the policy mood scores averaged .70 (*SD*=.039). The higher policy mood scores could be interpreted as somewhat liberal views towards budget changes applicable to government's public health spending (Ellis & Faricy, 2011).

Statistical Analysis

I performed the bivariate linear regression to determine the relationship between the dependent variable public health appropriations and the independent variables of congressional hearings days and policy mood scores. There were two phases to conducting the statistical analysis. First, I determined whether the regression models are a good fit for the data by evaluating the regression model summary for congressional hearing days and policy mood scores. Secondly, I evaluated the slope coefficients of the regression models to understand whether a linear relationship exists between the dependent and independent variables.

A bivariate linear regression was used to understand the influence of congressional attention and policy mood have on public health appropriations. This study addressed the research question: How have congressional attention regarding public health issues and the public's policy mood influenced the change in the level of federal

public health appropriations. Two separate regression models were analyzed for each of the hypotheses to test the research question.

Table 2

Bivariate linear regression for congressional hearing days

Model	*B*	*Std. Error*	*Beta*	*T*	*Sig.*	*95% CI for B*	
						Lower	*Upper*
Congressional hearing days	-030	.066	-.056	-.453	.652	-.163	.103

R^2=.003
Adjusted R^2 =--012

a. Dependent Variable: Public Health Appropriation

Congressional hearing days. The null hypothesis associated with the research question presume that congressional hearing days did not influence public health appropriations. Reviewing the data from the analysis, the null hypothesis could not be rejected since the regression model indicated that congressional hearings days did not have a statistically significant effect on public health appropriations. From the congressional hearing days model summary, R^2 =..003 indicated congressional hearing days explained only .3% of the variance of public health appropriations. *Adjusted R^2* =-.012 (-.1.2%) was less than the value of R^2. Therefore, the number of congressional hearing days accounted for (.3%) of the variation in public health appropriations with *adjusted R^2* = -1.2% and having minimal effect according to Cohen (1988). Given that, it must be other factors having a stronger influence on public health appropriations.

The results of the bivariate linear regression were evaluated as whether to accept the null hypotheses. In Table 2, the slope coefficient, b_1, was reported as -.030, p =.652.

The results also indicated 95% Confidence intervals (CI) between -.163 and .103. Given that the CI contained zero, the slope coefficient was not statistically significant. Given that *p*=.652, the slope coefficient was not statistically significant and there was no linear relationship between congressional hearing days and public health appropriations. Accepting the null hypothesis, I concluded the congressional hearing model did not predict an increase in public health appropriations, *t* (66) =-.453, *p=.652, adjusted* R^2*=.012.*

Policy mood scores. The second null hypothesis associated with the research question presumes that policy mood did not have a statistically significant effect on public health appropriations.

Table 3

Bivariate linear regression for policy mood scores

Model	*B*	*Std. Error*	*Beta*	*T*	*Sig.*	*95% CI for B*	
						Lower	*Upper*
Policy mood	-44.208	66.599	-.081	.664	.509	-177.178	88.761

R^2=.007
Adjusted R^2=-.008

a. Dependent Variable: Public Health Appropriation

Reviewing the data from the analysis, I concluded the null hypothesis could not be rejected since the policy mood regression model indicated that policy mood scores did not have a statistically significant effect on public health appropriations. In Table 3, the. R^2=.007 (.7%) of the variance of public health appropriations, explained only7% of the variance of public health appropriations, allowing for other factors having influence on public health appropriations. *Adjusted* R^2=-.008 (-.8%) was less than the value of R^2,

indicating factors other than policy mood and congressional hearings have influence on public health appropriations. Therefore, policy mood scores accounted for less than 1% of the variation in public health appropriations with *adjusted* R^2 having minimal effect according to Cohen (1988).

The results of the bivariate linear regression were evaluated as whether to accept the null hypotheses for the policy mood regression model. For the regression model, b_1, the slope coefficient was reported as (-44.208) indicating a decrease in the percentage change in public health appropriations. In the policy mood regression model, Table 3 shows the 95% CI was between (-177.178%) and (88.761%). Give that the boundaries include *zero* and p=.509, the slope coefficient (-44.208) was not statistically significant. Therefore, there was no linear relationship between policy mood and public health appropriations. Given that I accepted the null hypotheses, I cannot conclude that this budget change was due to a change in policy mood scores, $t\ (66)$ =-.664, p=.509, *adjusted* R^2=.012.

Summary

A linear regression was used to understand the influence of congressional attention and policy mood have on public health appropriations. Seven statistical assumptions were analyzed for violations before conducting the analysis. All statistical assumptions were met except for Assumption #5 which, stated there should be no significant outliers for the study. The casewise diagnostics was used to identify three outliers that were included to consider statistically significant results. The null hypotheses associated with the research question presume that congressional hearing days and policy

mood scores do not influence public health appropriations. Reviewing the data from the analysis from the linear regression, the null hypothesis could not be rejected since both regression models indicated that congressional hearings days and policy mood scores did not have a statically significant effect on public health appropriations.

In chapter 5, I will discuss the findings of my study. This chapter will also highlight the limitations of the study while conducting the research. Recommendations are provided for further research on public health funding, as well as the implications for public health practice and social change.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of this study was to examine the influence of congressional attention and policy mood as they relate to changes in federal public health appropriation spending levels. Using data downloaded from the PAP database, I conducted two bivariate linear regressions for congressional attention and policy mood consisting of data from 1947 to 2015. My analysis showed that congressional attention and policy mood did not have a statistically significant relationship to budget changes in federal public health appropriations. In this chapter, I will provide an interpretation of my findings, discuss issues related to the limitations of this study, offer recommendations for further research, and discuss the implications these findings may have for social change.

Interpretation of the Findings

With findings from this study, I offered insight into the influence of congressional attention and policy mood on budget changes in the federal public health appropriations level. I conducted a separate regression model for each independent variable and to determine if the results would be similar. Although I found congressional hearings and policy mood not to be statically significant in contributing to federal public health appropriations, the results did provide some insight into the relationship between changes in public health appropriation levels and the factors of congressional attention and policy mood. Given that, the findings indicated other variables influencing the appropriation of federal public health funding.

The comparison of the results of my study to previous studies on congressional attention and policy mood relative to public spending is challenging due to the uniqueness of my study. As previously stated, there was limited research examining the relationship between the factors of congressional hearings days and policy mood scores on federal public health appropriations. Research related to federal spending levels was limited to examining government-wide spending levels and not specifically public health spending levels. Even when narrowed to health care spending, the research did not address federal public health spending levels. Research studies surrounding public health funding levels tend to focus on the necessity of funding at the state and local levels and the correlation between the amounts of funding received in communities and health outcomes (Bernet, 2012; Bradley et al., 2016; Marton et al., 2015; Mays & Smith, 2011). Studies incorporating congressional funding decisions are relative to a complex environment, which included political and environmental constraints (Mays & Hogg, 2015; Pacheco & Boushey, 2014)

Previous research related to congressional attention to budgetary changes in funding levels have focused on government-wide spending levels, energy, and nuclear research and development funding, (Hegelich et al., 2015; Liang & Fiorino, 2013; Mortensen, 2009). In my study, congressional attention did not have a statistically significant impact on the fiscal year level of changes within federal public health appropriations. Furthermore, the results of my study indicated factors other than the number of congressional hearing days influenced funding changes in annual federal public health appropriations. Similar studies have indicated no systematic association

between the relative magnitude of the attention increase measure and public spending changes or that congressional attention, though weak, predicted budget changes and affected the final policy outcome of budget changes (Hegelich et al., 2015; Mortensen, 2009). These results were consistent with my findings when conducting the bivariate linear regression between congressional hearing days and federal public health appropriations.

Studies indicated that congressional attention was stimulated by public attitudes to different spending levels of popular and unpopular programs (Ellis & Faricy, 2011; Faricy & Ellis, 2014; Mortensen, 2009). Furthermore, congressional attention could have some impact indirectly on spending levels; however, this impact was not a one-to-one, systematic association between the two variables. My findings were similar to these other studies indicating there are other factors than the number of congressional hearing days that affects changes in public spending

In this study, I attempted to show a relationship between the two variables as well as whether congressional hearing days had an impact on federal public health appropriations. I found no effect between the two variables. However, contrary to my findings, Hegelich et al. (2015) stated that congressional attention, though weak, predicted budget changes and affected the final policy outcome. Using a different quantitative methodology of a mixed methods data-mining approach, which included a generalized linear model, Hegelich et al. also attempted to link policy punctuations to congressional attention through the annual number of congressional hearing days. In this study, I was not able to define a linear relationship in which congressional attention

would predict budget changes in public health appropriations. I was able to identify extreme budget changes through the analysis process indicating policy punctuations, though not related to congressional attention. With further research, using models such as the stochastic process model, results could perhaps lead to linking specific budget changes in federal public health appropriations to annual congressional hearing days.

The policy mood regression model indicated no statistical significance in the relationship between policy mood and federal public health appropriations. However, these results also indicated that factors other than policy mood scores are impacting the level of budget changes for public health appropriations. The results of $t = .66$, $p = .50$ in this study indicate that policy mood did not predict federal public health appropriations. However, research on public opinion suggested the public did react to how much Congress allocates to specific programs (Barry & McGinty, 2014; Ellis & Faricy, 2011; Faricy & Ellis, 2014). Findings from my study were consistent with similar studies indicating changes in the public's opinion was not responsive to changes in federal spending (Ellis & Faricy, 2011; Faricy & Ellis, 2014). My study produced similar results that were not statistically significant $t = 1.06$, $p = .30$. However, research has indicated that the public's lack of knowledge regarding the budgetary process or understanding of the size of direct appropriations in any number of categories did not preclude public opinion from responding systematically to changes in the size of that budget in those same categories (Ellis & Faricy, 2011).

The purpose of the study was in the context of my theoretical framework of the PET emphasizing policy punctuations. The PET focuses on those mechanisms that lead

to policy and budget change occurring within the policy process (Baumgartner et al., 2014). The complex systems involved in PET has made it applicable to defining complex systems within political institutions and policy processes (Baumgartner et al., 2014). The PET progressed into a theory of agenda setting and information processing, with both components being interrelated (Baumgartner et al., 2014). The congressional attention component consists of those agenda items requiring congressional attention and possibly affecting public opinion (Mortensen, 2009). In this study, I attempted to generate findings relevant to the theoretical framework.

I identified budget punctuations within the analysis of 68 years of appropriation data. By reviewing the data for outliers, I identified budget changes of over 50% in the appropriation data. These budget changes exhibited an influx of funds that determine the direction of budget policy within government spending and specifically within public health budget policy. Therefore, these outliers might represent an explanation of a policy change within the study period.

Congress receives an abundance of information to process during congressional hearings. In this study, I identified an average of over 50 hearing days per year in which the focus was on federal public health appropriations. According to Kingdon (2011), the agenda setting process narrows the focus of attention of congressional committees from several problems to those of most significance during the policy process. Even within health, agenda setting can narrow issues to biomedical health or public health. Problem recognition was important within the agenda-setting context along with the political climate at the given time based on the changes within the agenda of a new presidential

administration or the national mood (Lovett et al., 2015). Furthermore, actors within the policy process receiving considerable press coverage and public attention could affect the movement of agendas, impacting and enhancing an agenda item to congressional attention (Johnson, & Kellstedt, 2014). The results of this study suggested the level of congressional attention that was given to public health policy outcomes. The number of congressional hearing days allocated to discussing public health funding issues indicated the value of this issue. Although the findings in this study indicated punctuated budget changes within the study period, I was unable to determine a statistical relationship between the independent variables of congressional attention and policy mood and the dependent variable of federal public health funding. Furthermore, I was unable to determine whether these levels of changes were due to congressional attention and policy mood, which did not support the PET. Therefore, PET may not have been the most suitable theory for determining the statistical relationships that result from public health budgetary changes.

Limitations of the Study

The limitations of this study were relative to the data collection and analysis of the secondary data set. These limitations included the composition and limitations of the data set, which affected my analysis. The composition of the health budget line has changed over the past 68 years. Over the years, the budget line has not only included discretionary funding for public health agencies but has also included mandatory funding (True, 2009). Furthermore, the reorganization of the federal government agencies in 1980 resulted in only five of the eight USPHSA being funded through this budget line (True,

2009. The other public health service agencies are funded through Interior/Environment and Agriculture, subcommittees and, therefore, were not captured in the public health appropriations funding (Redhead, 2014). However, the funding for the major public health agencies, such as the CDC, NIH and SAMSHA, were captured Redhead, 2014). Given that, much of the discretionary federal public health appropriation was captured for the study. However, the findings in this study did not indicate an influence of congressional attention and policy mood on the changes in appropriation of federal funding to these agencies. Based on the results of this study, other external or internal factors influence these budgetary changes.

The data set that I used in this study provided a broad range of congressional committees within the House and Senate. Retrieving congressional hearing days that were related to health resulted in congressional hearing days collected across the spectrum of congressional committees, not just health-related committees. Some committees may have only conducted a few hearing days that focused on a health-related matter that was combined with a non-health-related issue. I included these committee hearing days to ensure the data set for congressional hearing days was consistent with the fiscal year appropriations. I also wanted to ensure an adequate sample size of congressional hearing days by retrieving a full set of health-related congressional hearings. Therefore, I could account for most of the congressional hearing days that were health related. Given that, these congressional hearing days indicated the level of congressional attention that was given to health-related funding issues over the 68-year study period for my study. However, I did not find a statistically meaningful relationship

between congressional attention and federal public health appropriations. As a result, the number of congressional hearing days did not influence the level of appropriation changes in federal public health funding. These results could also indicate that an increase or decrease in federal public health appropriations recommended by Congress could not be determined by how many hearing days Congress allowed to negotiate funding during the fiscal year.

Another limitation of the study was that I only focused on two factors that could influence the level of budget changes in federal public health appropriations in this study. Based on the results of the study, I was not able to determine a statistically significant relationship between the independent and dependent variables or find a predictive relationship. This finding leads to other factors influencing federal public health funding, which was beyond the scope of this study.

Given the identified limitations, the findings of this study are valid and generalizable to the specific dependent variable, federal public health funding. The results of this study are not generalizable to other types of state and local public health funding or other budget periods for public health funding. The findings of this study are based on the specific budget period for the federal congressional appropriation cycle including federal public health appropriations. Therefore, the results of this study were not generalized to past or future budget situations. However, the results could be meaningful to the theory of policy punctuations and the public health finance field.

Recommendations

My research used data collected from the PAP to determine the influence of congressional attention and policy mood on the level of budget changes within federal public health appropriations. Further research seeking to broadly examine the influence on the level of budget changes for public health appropriations should not be as limited and should include data collected from the individual agencies' budget sources. Further research examining additional factors should also be considered.

I recommend future researchers include all the public health service agencies appropriations and examine each of the agencies funding sources separately. By analyzing the budget changes in the appropriation levels separately, one could determine if any of the external factors could influence the agency's budget. Therefore, public health officials and policy-makers would have additional information relevant to the individual agencies based on the funding streams. However, the researcher would need to use another data source other than PAP since the appropriation data set for budget authority was not available separately by the agency.

I also recommend examining partnerships as an external factor along with congressional hearing days and policy mood. Advocacy was known to play a role in influencing congressional attention regarding changes in funding levels (Mortensen, 2009). Partnerships are key stakeholders for public health entities and are active in supporting public health funding that can support their communities.

Much of federal public health appropriation was allocated to the states and local levels for public health programs. Further research could determine how these external

factors impact funding at the state and local levels that receive federal public health funding. State and local health departments rely on federal funding to implement and maintain critical chronic and infectious disease programs in the community (Honore & Gapenski, 2014).

I also recommend examining the influence that congressional committees by House and Senate would have on federal public health funding. Through my research, there was a wide spectrum of congressional committees allocating congressional hearing days relevant to health funding during the 68-year span. Based on the composition of the committees, further research could provide insight as to the direction of federal public health appropriations.

Also, further research employing a qualitative research approach exploring factors that influence changes in federal public health funding levels. Interviewing key actors such as governmental public health officials, nongovernmental public health staff, and legislative staff to explore perspectives on factors influencing changes in public health funding levels. Using semi structured interviews will accommodate open-ended interview questions ensuring the participant has an opportunity to engage in a valuable discussion with the researcher. Using this approach could not only identify external and internal factors that key actors believe influence federal public health funding, however, those factors they believe are also beyond their control.

Implications

A requirement of this study was to explore how this research can impact positive social change. I sought to create social change by contributing to the empirical evidence

and policy punctuation discussion of public health financing by examining the influence of congressional attention and policy mood on the level of budget changes in federal public health appropriations. Although my research occurred at the federal level, real social change occurs at the local and community level. However, I intended for my research to illustrate how previous research has approached this issue and how future research could better support public health officials, policy-makers, and community health leaders in advancing evidence-based public health policy.

Scholars have researched congressional attention and public policy mood relative to federal spending; congressional attention has been studied to examine its relevance to policy issues encompassing public spending (Hegelich et al., 2015; Mortensen, 2009; Xinsheng et al., 2011). Previous research has examined factors, such as congressional attention, public attitudes, organizational changes, research and development, which influence federal and state spending levels (Barry & McGinty, 2014; Blendon et al., 2010; Liang & Fiorino, 2013; Robinson et al., 2014). However, limited research has focused on congressional attention and policy mood and the impact on federal public health spending. My study attempted to show whether these external factors influenced the level of changes in appropriation for federal public health funding. Scholarly implications include furthering the study of policy punctuations within the public health finance field.

The findings from this study could assist federal health officials in planning congressional outreach and appropriations strategies to improve the implementation of public health programs. Furthermore, the results may perhaps inform state and local

health officials' decision-making of allocating resources to support the essential public health services used to improve the health of the community. In addition, these findings might inform public health advocacy groups targeting public health messages to Congress that focus on increasing resources to targeted programs. As a result, both health officials and public health advocacy groups could influence the level of resources needed to improve maternal and child health programs, infectious diseases, and chronic diseases programs.

My study contributes to social change by informing public health officials, policy-makers and community health leaders supporting public health programs. Public health policy decision-makers and organizations supporting public health programs can determine the allocation of resources within the community necessary for social change. Health officials in state and local health departments could use this information within the process of allocating resources supporting the essential public health services for social change, which could improve the health of the community leading to social change. Also, obtaining information on the relationship between congressional attention and policy mood on federal public health appropriations assists health officials in planning congressional outreach and appropriations strategies, which can be used to improve the implementation of public health programs for social change.

Conclusion

The Institute of Medicine Report (2012) from the Committee on Public Health Strategies to Improve Health has acknowledged the annual congressional appropriation process, including the frequent public health funding fluctuations, are impeding the

ability of public health departments to carry out the essential public health services. Federal public health funding serves a critical need and source of funding for state and local health departments. My examination of the relationship between congressional attention and policy mood did not uncover statistically significant findings to confirm these fluctuations in funding levels and changes. However, my results do support the need for a better understanding of the political environment and the interaction of budget and priority setting within the policy process.

In hopes of contributing to the public health finance research, I examined the relationship between congressional attention and policy mood on the impact of budget changes within federal public health appropriations. My results did not provide evidence of a link between these variables. However, this was the first study of its kind within the public heath financing field, which observed policy punctuations. Thus, this study becomes a part of the public health policy literature to examine other factors influencing federal public health funding.

References

Anderson, S., & Harbridge, L. (2010). Incrementalism in appropriations: Small aggregation, big changes. *Public Administration Review, 70*(3), 464-474. doi:10.1111/j.1540-6210.2010.02160.x

Barry, C. L., & McGinty, E. E. (2014). Stigma and public support for parity and government spending on mental health: A 2013 national opinion survey. *Psychiatric Services, 65*(10), 1265-1268. doi:10.1176/appi.ps.201300550

Baumgartner, F., & Jones, B. (1993). *Agenda and instability in American politics*. Chicago, IL: University of Chicago Press.

Baumgartner, F., Jones, B. D., & Mortensen, P. (2014). Punctuated equilibrium theory: Explaining stability and change in public policy making. In P. Sabatier & C. Weible (Eds.), *Theories of the policy process* (3rd ed.; pp. 59-103). Boulder, CO: Westview Press.

Bernet, P. (2012). The increasing importance of public health funding research. *Journal of Public Health Management & Practice, 18*, 303-305. doi:10.1097/PHH.0b013e31825aadc5

Blendon, R., Benson, J., SteelFisher, G., & Connolly, J. (2010). Americans' conflicting views about the public health system, and how to shore up support. *Health Affairs, 29*(11), 2033-2040. doi:10.1377/hlthaff.2010.0262

Blendon, R. J., Hunt, K., Benson, J. M., Fleischfresser, C., & Buhr, T. (2006). Understanding the American public's health priorities: A 2006 perspective. *Health Affairs, 25*, w508-w515.doi:10.1377/hlthaff.25.w508

Bradley, E., Canavan, M., Rogan, E., Talbert-Slagle, K., Ndumele, C., Taylor, L., & Curry, L. (2016). Variations in health outcomes: The role of spending on social services, public health, and health care, 2000–09. *Health Affairs, 35*(5), 760-768. doi:10.1377/hlthaff.2015.0814

Breunig, C., & Koski, C. (2006). Punctuated equilibria and budgets in the American states. *Policy Studies Journal, 34*(3), 363-379. doi:10.1111/j.1541-0072.2006.00177.x

Breunig, C., & Koski, C. (2012). The tortoise or the hare? Incrementalism, punctuations, and their consequences. *Policy Studies Journal, 40*, 45-68. doi:10.1111/j.1541-0072.2011.00433.x

Brown, L. (2010). The political face of public health. *Public Health Reviews, 32*(1), 155-173. doi:10.1007/BF03391596

Byrne, D. (2017). How can I use descriptive statistics?. *Project Planner*. doi:10.4135/9781526408570.

Chen, S., & Chen, H. (2012). Regression to the mean. In N. J. Salkind (Ed.). *Encyclopedia of research design* (pp. 1236-1237). Thousand Oaks, CA: SAGE Publications Ltd. doi:10.4135/9781412961288

Chen, L., Jacobson, J., Roberts, S., & Palm, D. (2012). Resource allocation and funding challenges for regional local health departments in Nebraska. *Journal of Public Health Management and Practice, 18*(2), 141-147. doi:10.1097/PHH.0b013e3182294fff

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). New

York: NY: Psychology Press.

Creswell, J. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed). Thousand Oaks, CA: Sage Publications.

Crow, D. A. (2010). Policy punctuations in Colorado water law: The breakdown of a monopoly. *Review of Policy Research, 27*(2), 147-166.

Ellis, C., & Faricy, C. (2011). Social policy and public opinion: How the ideological direction of spending influences public mood. *Journal of Politics, 73*(4), 1095-1110. doi:10.1017/S0022381611000806

Elwood, T. (2008). Politics of the federal budget process. *Journal of Allied Health*, *37*(1), 3-7. Retrieved from https://ezp.waldenulibrary.org/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=105807752&site=eds-live&scope=site

Faricy, C., & Ellis, C. (2014). Public attitudes toward social spending in the United States: The differences between direct spending and tax expenditures. *Political Behavior, 36*(1), 53-76. doi:10.1007/s11109-013-9225-5

Field, A. (2013). *Discovering statistics using IBM SPSS statistics* (4th ed.). London, England: Sage.

Finkler, S. A. (2005). *Financial management for public, health, and not-for profit organizations* (2nd ed.). Upper Saddle River, NJ: Pearson Prentice Hall.

Frankfort-Nachmias, C., & Nachmias, D. (2008). *Research methods in the social sciences* (7th ed.). New York, NY: Worth.

Givel, M. (2006). Punctuated equilibrium in limbo: The tobacco lobby and U.S. state

policymaking from 1990 to 2003. *Policy Studies Journal, 34*(3), 405-418. Retrieved from https://ezp.waldenulibrary.org/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=edsgea&AN=edsgcl.151959613&site=eds-live&scope=site

Hegelich, S., Fraune, C. & Knollmann, D. (2015), Point predictions and the punctuated equilibrium theory: A data mining approach—U.S. nuclear policy as proof of concept. *Policy Studies Journal, 43*, 228–256. doi:10.1111/psj.12089

Holmes, W. (2014). *Using propensity scores in quasi-experimental designs,* 245-271. London, England: SAGE Publications Ltd. doi:10.4135/9781452270098

Honore, P. E., & Gapenski, L. (2014). Human resource management for public health. L Shi & J. A. Johnson (Eds.), *Novick & Morrow's public health administration. Principles for population-based management* (3rd ed.; pp. 221-240). Burlington, MA: Jones & Bartlett Learning.

Institute of Medicine. (2012). *For the public's health: Investing in a healthier future*. Washington, DC: The National Academies Press.

Jarris, P., Leider, J., Resnick, B., Sellers, K. & Young, J. (2012). Budgetary decision making during times of scarcity. *Journal of Public Health Management & Practice, 18,* 390-392. doi:10.1097/PHH.0b013e31825b80fa

Jenkins-Smith, H., Nohrstedt, D., Weible, C., & Sabatier, P. (2014). The advocacy coalition framework: Foundations, evolution, and ongoing research. In P. Sabatier & C. Weible (Eds.), *Theories of the policy process* (3rd ed.; pp. 183-223). Boulder, CO: Westview Press.

Johnson, T., & Kellstedt, P. (2014). Media consumption and the dynamics of policy mood. *Political Behavior, 36*(2), 377-399. doi:10.1007/s11109-013-9233-5

Jones, B. D., & Baumgartner, F. R. (2012). From there to here: Punctuated Equilibrium to the general punctuation thesis to a theory of government information processing. *Policy Studies Journal, 40*(1), 1-20. doi: 10.1111/j.1541-0072.2011.00431.x

Jones B., Baumgartner F., & True J. (1998). Policy punctuations: U.S. budget authority, 1947–1995. *Journal of Politics, 60*(1), 1-33. doi: 10.2307/2647999

Keith, R. (2008). Introduction to the federal budget process. *Congressional research service: Report for Congress*, 98-721.

Kingdon, J. (2011). *Agendas, alternatives, and public policies* (2nd ed.). Boston, MA: Longman.

Laerd Statistics. (2015). Simple linear regression using SPSS Statistics. Statistical tutorials and software guides. Retrieved from https://statistics.laerd.com/

Lantz, P. M., Alexander, J. A., Adolph, C., & Montgomery, J. P. (2014). State government organization of health services, 1990–2009: Correlates and consequences. *Journal of Public Health Management and Practice, 20*(2), 160–167. Retrieved from https://ezp.waldenulibrary.org/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=edsgea&AN=edsgcl.364997464&site=eds-live&scope=site

Lavrakas, P., & Traugott, M. (2019). In *Experimental methods in survey research: Techniques that combine random sampling with random assignment* (Hoboken, NJ: John Wiley and Sons.

Leider, J., Sellers, K., Shah, G., Pearsol, J., & Jarris, P. (2012). Public health spending in 2008: On the challenge of integrating PHSSR data sets and the need for harmonization. *Journal of Public Health Management & Practice, 18,* 355-363. doi:10.1097/PHH.0b013e31824c60d7

Liang, J., & Fiorino, D. J. (2013). The implications of policy stability for renewable energy innovation in the United States, 1974–2009. *Policy Studies Journal*, *41*, 97-118. doi:10.1111/psj.12004

Library of Congress (n.d.). Congressional information service. Retrieved from https://lccn.loc.gov/79158879

Library of Congress (n.d.). ProQuest congressional database. Retrieved from (http://eresources.loc.gov/record=e1000130~S9

Livingood, W., Morris, M., Sorensen, B., Chapman, K., Rivera, L., Beitsch, L., …Wood, D. (2013). Revenue sources for essential services in Florida: Findings and implications for organizing and funding public health. *Journal of Public Health Management & Practice, 19*(4), 371-378. doi: 10.1097/PHH.0b013e318269e41c

Lovett, J., Bevan, S., & Baumgartner, F. R. (2015). Popular presidents can affect congressional attention, for a little while. *Policy Studies Journal, 43*(1), 22-43. doi:10.1111/psj.12087

Martin, M. H., & Streams, M. (2015). Punctuated equilibrium theory: An empirical investigation of its relevance for global health expenditure. *Public Budgeting & Finance*, *35*(1), 73–94. doi:10.1111/pbaf.12055

Marton, J., Sung, J., & Honore, P. (2015). Does more public health spending buy better

health? *Health Services Research and Managerial Epidemiology, 2*, 1-9. doi:10.1177/2333392815580750

Mays, G. P., & Smith, S. A. (2009). Geographic variation in public health spending: Correlates and consequences. *Health Services Research, 44*(5), 1796-1817. doi:10.1111/j.1475-6773.2009.01014.x

Mays, G. P., & Smith, S. A. (2011). Evidence links increases in public health spending to declines in preventable deaths. *Health Affairs, 30*(8), 1585-1593. doi: 10.1377/hlthaff.2011.0196

Mays, G. P., & Hogg, R. A. (2015). Economic shocks and public health protections in U. S. metropolitan areas. *American Journal of Public Health, 105*, S280-S287. doi:10.2105/AJPH.2014.302456

Mortensen, P. (2009). Political attention and public spending in the United States. *The Policy Studies Journal, 37*(3), 435-455. doi: 10.1111/j.1541-0072.2009.00322.x

National Opinion Research Center. (2015). Trends in national spending priorities, 1973-2014. *General Social Survey Final Report*. Retrieved from NORC website: https://gssdataexplorer.norc.org/documents/906/display

National Opinion Research Center. (2017). U.S. General Social Survey. Retrieved fromhttp://www.gss.norc.org/

Nishishiba, M., Jones, M., & Kraner, M. (2017). *Research Methods and Statistics for Public and Nonprofit Administrators: A Practical Guide*. London, England: SAGE Publications.

Nowlin, M. (2011). Theories of the policy process: State of the research and emerging

trends. *Policy Studies Journal*, *39*(1), 41-60. Retrieved from https://ezp.waldenulibrary.org/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=edsgea&AN=edsgcl.253322309&site=eds-live&scope=site

Office of Management and Budget. (2016). Introduction to the historical tables: Structure, coverage and concepts. Retrieved from https://www.whitehouse.gov/sites/default/files/omb/budget/fy2017/assets/hist_intro.pdf

Ogden, L. (2012). How federalism shapes public health financing, policy, and program options. *Journal of Public Health Management and Practice*, *18*(4), 317-322. Retrieved from https://ezp.waldenulibrary.org/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=edsgea&AN=edsgcl.303837750&site=eds-live&scope=site

Pacheco, J., & Boushey, G. (2014). Public health and agenda setting: Determinants of state attention to tobacco and vaccines. *Journal of Health Politics, Policy & Law, 39*(3), 565-589. doi:10.1215/03616878-2682612

Policy Agenda Project. (2014). *Congressional hearings codebook.* Retrieved from http://www.policyagendas.org/

Policy Agenda Project. (2015). *Policy moods codebook.* Retrieved from https://comparativeagendas.s3.amazonaws.com/codebookfiles/Policy_Moods_Codebook_1.pdf

Policy Agenda Project. (2015). *Topics codebook.* Retrieved from https://www.comparativeagendas.net/us

Prndle, D. F. (2012). Importing concepts from biology into political science: The case of punctuated equilibrium. *Policy Studies Journal, 40*(1), 21-44. doi:10.1111/j.1541-0072.2011.00432.x

Prust, M. L., Clark, K., Davis, B., Pallas, S. W., Kertanis, J., O'Keefe, E.,… Humphries, D. (2015). How Connecticut health directors deal with public health budget cuts at the local level. *American Journal of Public Health, 105,* S268–S273. doi:10.2105/AJPH.2014.302499

RAOsoft. (2004). *Sample size calculator*. Retrieved from http://www.raosoft.com/samplesize.html

Redhead, C., Bagalman, E., Heisler, E., Johnson, J., Lister, S., Sarata, A., & Thaul, S. (2014). Public health services agencies: Overview and funding. *Congressional research service: Report for Congress*, 7-5700.

Redhead, C., & Dabrowska, A. (2015). Public health services agencies: Overview and funding (FY 2011–FY 2016). *Congressional research service: Report for Congress*, R43304.

Reschovsky, A., & Zahner, S. J. (2016). Forecasting the revenues of local public health departments in the shadows of the "Great Recession". *Journal of Public Health Management and Practice, 22*(2), 120-128. Retrieved from https://ezp.waldenulibrary.org/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=edsgea&AN=edsgcl.441647213&site=eds-live&scope=site

Rhee, D. (2014). The impact of performance information on congressional

appropriations. *Public Performance & Management Review, 38,* 100-124. doi:10.2753/PMR1530-9576380105

Robinson S., & Caver F. (2006). Punctuated equilibrium and congressional budgeting. *Political Research Quarterly, 59*(1), 161-166. doi:10.1177/106591290605900114

Robinson, S. E., Flink, C. M., & King, C. M. (2014). Organizational history and budgetary punctuation. *Journal of Public Administration Research & Theory, 24*(2), 459-471. doi:10.1093/jopart/mut035

Ryu, J. (2009). Exploring the factors for budget stability and punctuations: A preliminary analysis of state government sub-functional expenditures. *The Policy Studies Journal, 37*(3) 457-473. doi:10.1111/j.1541-0072.2009.00323.x

Ryu, J. E. (2011). Legislative professionalism and budget punctuations in state government sub-functional expenditures. *Public Budgeting & Finance, 31*(2), 22-42. doi:10.1111/j.1540-5850.2011.00978.x

Santerre, R. E. (2009). Jurisdiction size and local public health spending. *Health Services Research, 44*(6), 2148-2166. doi:10.1111/j.1475-6773.2009.01006.x

Saturno, J. V., Heniff Jr., B., & Lynch, M. S. (2016). The Congressional Appropriations Process: An Introduction. *Congressional Research Service: Report*, 1–21. Retrieved from https://ezp.waldenulibrary.org/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=tsh&AN=119907968&site=eds-live&scope=site

Schick, A (2007). *The federal budget: Politics, policy, process*. Washington, D.C.: Brookings Institute Press.

Schlager, E. (2007) A comparison of frameworks, theories, and models of policy process. In P. Sabatier (ed.), *Theories of the policy process*. Boulder, CO: Westview Press.

Shi, L., & Johnson J. A., (Eds) (2014). *Novick & Morrow's public health administration: Principles for population-based management* (3rd ed.). Burlington, MA: Jones & Bartlett Learning

Sink, C. A., & Mvududu, N. H. (2010). Statistical power, sampling, and effect sizes: Three keys to research relevancy. *Counseling Outcome Research and Evaluation*, *1*(2), 1–18. doi:10.1177/2150137810373613

Smith, T. W. (1984). *A preliminary analysis of methodological experiments in the 1984 GSS* (GSS Methodological Report *No. 30).* Retrieved from The General Social Survey website: http://www.gss.norc.org/Documents/reports/methodological-reports/MR030 A Preliminary Analysis of Methodological Experiments on the 1984 GSS.pdf

Smith, T. W. (1987). That which we call welfare by any other name would smell sweeter: An analysis of the impact of question wording on response patterns. *Public Opinion Quarterly 51*(1), 75-83. doi: 10.1086/269015

Smith, T.W. (2006). *Wording effects on national spending priority items across time, 1973-2004* (GSS Methodological Report *No. 107*). Retrieved from The General Social Survey website: http://www.gss.norc.org/Documents/reports/methodological-reports/MR107.pdf

Stegner, T., & Fort, R. (1995). A test of congressional dominance over administrative agencies: The case of the U.S. Forest Service. *Social Science Quarterly*, *76*(4),

839-852. Retrieved from https://ezp.waldenulibrary.org/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=edsgea&AN=edsgcl.17777419&site=eds-live&scope=site

Sweeney, K. (2011). Regression toward the mean. In M.S. Lewis-Beck, A. Bryman, & T. Futing Liao. (Eds) *The SAGE Encyclopedia of Social Science Research Methods.* Thousand Oaks, CA: SAGE Publications Ltd. doi: 10.4135/9781412950589

Tollestrup, J. (2014). Congressional action on FY 2015 appropriations process. *Congressional Research Service: Report*, R43776.

True, J.L. (2009). *Historical budget records converted to the present categorization with actual results for FY 1947-2008*. Retrieved from Policy Agenda Project website: https://www.comparativeagendas.net.

U.S. Government Information. (2016). *About news. What are congressional sessions?* Retrieved from http://usgovinfo.about.com/od/uscongress/a/congsessions.htm

U.S. Government Publishing Office. (2015). *About congressional hearings*. Retrieved from https://www.gpo.gov/help/about_congressional_hearings.htm

Wlezien, C., & Soroka, S. N. (2003). Measures and models of budgetary policy. *The Policy Studies Journal*, *31*(2) 273-286. Retrieved from https://ezp.waldenulibrary.org/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=edsgea&AN=edsgcl.103014876&site=eds-live&scope=site

Woon, J., & Anderson, S. (2012). Political bargaining and the timing of congressional appropriations. *Legislative Studies Quarterly, 37*(4), 409-436. doi:10.1111/j.1939-9162.2012.00056.x

Workman S., Jones B., & Jochim A. (2009). Information processing and policy dynamics. *The Policy Studies Journal*, *37*(1) 75-92. doi: 10.1111/j.1541-0072.2008.00296.x

Worsham, J., & Stores, C. (2012). Pet sounds: Subsystems, regimes, policy punctuations, and the neglect of African- American farmers, 1935-2006. *Policy Studies Journal*, *40*(1), 169-190. Retrieved from https://ezp.waldenulibrary.org/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=edsgea&AN=edsgcl.279475663&site=eds-live&scope=site

Xinsheng, L., Lindquist, E., & Vedlitz, A. (2011). Explaining media and congressional attention to global climate change, 1969-2005: An empirical test of agenda-setting theory. *Political Research Quarterly*, *64*, 405-419. doi:10.1177/1065912909346744

Appendix A: Policy Agenda Project Congressional Hearing Codes Health

300: General

Examples: National Institute of Health (NIH) appropriations, Department of Health and Human Services (DHHS) appropriations, activities that provide little evidence of policy direction, commissions to study health issues, solvency of Medicare.

331: Prevention, communicable diseases and health promotion

Examples: Cancer screening, health promotion programs, consumer guides, medical information, health education in schools, immunization, prevention programs for osteoporosis, sexually transmitted diseases, tuberculosis, federal response to AIDS, breast cancer treatment, skin cancer, renal disease, treatment of high blood pressure, Legionnaire's disease, communicable disease control, sickle cell anemia prevention, polio, Center for Disease Control funding, designation of national health promotion holidays.

332: Infants and children

Examples: Preventive services for children, prenatal care, child and juvenile health care, school health programs, child immunization, Comprehensive Child Immunization Act, reduction of infant mortality, promotion of breast feeding, prenatal care programs, child health care, sudden infant death syndrome, childhood malnutrition, fetal alcohol syndrome, child dental care.

333: Mental illness and mental retardation

Examples: Federal role in providing services to the mentally ill, mental health services, quality of care for mentally ill, mentally ill and handicapped children, specialized housing for mentally retarded, mental health centers, veteran's mental health.

341: Tobacco Abuse, Treatment, and Education

Examples: cigarette advertising and regulatory issues, ban on smoking in federal buildings, increase public awareness of smoking health risks, smoking prevention education programs, health effects associated with smoking.

342: Alcohol/Controlled and Illegal Drug Abuse, Treatment, and Education

Examples: implementation of the national minimum drinking age act, alcoholic beverage advertising act, alcohol abuse among the elderly, prevention of adolescent alcohol abuse, health insurance coverage of alcohol abuse treatment, drunk driving victims protection, drunk driving enforcement aid for states, alcoholism prevention programs, drug abuse education and prevention programs in schools, community based anti-drug programs, federal prison substance abuse treatment availability act, drug abuse treatment programs and insurance coverage, extension of drug and alcohol abuse prevention programs, health coverage of drug and alcohol abuse treatment programs, drug and alcohol abuse prevention programs in schools, drug and alcohol abuse in the armed services, juvenile alcohol and drug abuse, entertainment industry efforts to curb drug and alcohol abuse.

Appendix B: Policy Agenda Project Policy Mood Questions

Varname	Policy Code	Question
HCREFORM	301	As of right now, do you favor or oppose the healthcare reform proposals presently being discussed?
HEALTHGOV	301	Do you think it is the responsibility of the federal government to make sure all Americans have health care coverage, or is that not the responsibility of the federal government?
HLTHMORE	301	Do you think it is the responsibility of the federal government to make sure all Americans have health care coverage, or is that not the responsibility of the federal government?
HLTHPSRA	301	I'd like to read you a list of some programs and proposals that are being discussed in this country today. For each one, please tell me whether you strongly favor, favor, oppose, or strongly oppose it...The U.S. government guaranteeing health insurance for all citizens, even if it means raising taxes.
HLTHTAX	301	I notice you said you would like the government to do more on (health measures). Would you favor this increased activity if it required an increase in taxes?
MAINTAIN	301	Which of the following approaches for providing health care in the United States would you prefer–replacing the current health care system with a new government run health care system, or maintaining the current system based mostly on private health insurance?

MHEALTH1	301	The government ought to help people get doctors and hospital care at low cost. Agree or disagree?
MHEALTH2	301	Some say the government in Washington ought to help people get doctors and hospital care at low cost; others say the government should not get into this. Have you been interested enough in this to favor one side over the other?
MHEALTH3	301	There is much concern about the rapid rise in medical and hospital costs. Some feel there should be a government insurance plan which would cover all medical and hospital expenses. Others feel that medical expenses should be paid by individuals, and through private insurance like Blue Cross. Where would you place yourself on this scale, or haven't you thought very much about this?
NATHEAL	301	Are we spending too much, too little, or about the right amount on improving and protecting the nation's health
NATHEALY	301	Are we spending too much, too little, or about the right amount on health
NYTHEAL	301	Do you think the government in Washington should guarantee medical care for all people who don't have health insurance, or isn't that the responsibility of the government in Washington?
NYTHINS	301	Do you think the federal government should require companies to provide health insurance for all of their workers, or is this something that should be left up to the individual company?

NYTHINS2	301	Do you favor or oppose national health insurance, which would be financed by tax money, paying for most forms of healthcare?
RPHEALTH	301	There are many problems facing our nation today. But at certain times some things are more important than others, and need more attention from our Federal Government than others. I'd like to know for each of the things on this list whether you think it is something the government should be making a major effort on now, or something the government should be making some effort on now, or something not needing any particular government effort now. Taking steps to contain the cost of health care.
SPHLTH	301	Listed below are various areas of government spending. Please indicate whether you would like to see more or less government spending in each area. Remember that if you say 'much more,' it might require a tax increase to pay for it....Spend much more, spend more, spend the same as now, spend less, spend much less...Health.
SPAIDS	331	Should federal spending on SPENDING ON AIDS RESEARCH be increased, decreased, or kept about the same?
PROHIB1	342	If the question of national prohibition should come up again, would you vote wet or dry?
PROHIB2	342	Would you favor or oppose a law forbidding the sale of all beer, wine, and liquor throughout the nation?
NATDRUG	344	Are we spending too much, too little, or about the right amount dealing with drug

		addiction?
STEMCELL	398	Sometimes fertility clinics produce extra fertilized eggs, also called embryos, that are implanted in a woman's womb. These extra embryos either are discarded, or couples can donate them for use in medical research called stem-cell research. Some people support stem-cell research, saying it's an important way to find treatments for many diseases. Other people oppose stem-cell research, saying it's wrong to use any human embryos for research purposes. What about you—do you support or oppose stem-cell research?
NATSCI	398	Are we spending too much, too little, or about the right amount on supporting scientific research?
RICHTAX	107	What about rich people? Do you feel rich people are asked to pay MORE THAN THEY SHOULD in federal income taxes, about the RIGHT AMOUNT, or LESS THAN THEY SHOULD?

Appendix C: Congressional Committees

House Congressional Committees	Senate Congressional Committees
Appropriations Committee	Agriculture, Nutrition, and Forestry Committee
Armed Services Committee	Appropriations Committee
Budget Committee	Finance Committee
Education and the Workforce Committee	Health, Education, Labor and Pensions
Commerce Committee	Veteran's Affairs Committee
Government Reform and Oversight Committee	Special Committee on Aging
Judiciary Committee	
Veteran's Affairs Committee	
Ways and Means Committee	
Committee on Homeland Security	
Select Aging Committee	