Public Health Leadership to Advance Health Equity: A Scoping Review and Metasummary

A Dissertation Submitted to the

College of Graduate Studies and Research

in Partial Fulfillment of the Requirements

for the Degree of Doctor of Philosophy

in the College of Nursing

University of Saskatchewan, Saskatoon

By

Ruth Claire Betker, RN, MN, PhD(c), CCHN(C)

© Copyright Claire Betker, November 2016. All rights reserved.

Permission to use

In presenting this dissertation in partial fulfillment of the requirements for the Degree of Doctor of Philosophy from the University of Saskatchewan, I agree that the Libraries of University of Saskatchewan may make it freely available for inspection. I further agree that permission for copying of this dissertation in any manner, in whole or in part, for scholarly purposes may be granted by the professor or professors who supervised my dissertation work or, in their absence, by the Head of the Department or the Dean of the College of Nursing. It is understood any copying or publication or use of this dissertation or parts thereof for financial gain shall not be allowed without my written permission. It is also understood due recognition shall be given to me and to the University of Saskatchewan in any scholarly use which may be made of any material in my dissertation.

Disclaimer

Reference in this dissertation to any specific businesses, commercial products, process, or service by trade name, trademark, manufacturer, or otherwise, does not constitute or imply its endorsement, recommendation, or favoring by the University of Saskatchewan. The views and opinions of the author expressed herein do not state or reflect those of the University of Saskatchewan, and shall not be used for advertising or product endorsement purposes.

Requests for permission to copy or to make other uses of materials in this dissertation in whole or part should be addressed to:

Dean of the College of Nursing
University of Saskatchewan
107 Wiggins Road
Saskatoon, Saskatchewan, Canada S7N 5E5

OR

Dean of the College of Graduate Studies and Research
University of Saskatchewan
107 Administration Place
Saskatoon, Saskatchewan S7N 5A2

Abstract

Health inequities are health differences that are systematic across a population, result from the social conditions in which people live, and are considered unfair when by reasonable means they could be avoided. Health inequities are a pressing public health issue locally, nationally, and globally, and addressing these inequities is a matter of social justice. Public health leadership has been identified as critical for advancing health equity.

Public health leadership has been defined as influence that moves individuals, communities, organizations, and systems toward achieving goals that will result in better health and well-being. But what type of leadership is required in public health to address the social determinants of health and advance health equity? How is it described? How is that leadership developed and supported?

To begin to answer these questions and contribute to the knowledge and science of leadership in public health, an extensive scoping review of the literature was undertaken using Arksey and O'Malley's (2005) six-phase framework. The scoping review explored the evidence base (close to 8,000 articles) and iteratively revealed the factors that contribute to public health leadership at the individual, organizational, community, and system levels. Further discussion is provided regarding innovative and emerging tools, strategies, and mechanisms for public health leadership. The study considered two further questions in an additional phase of the review using a metasummary method: How is leadership described in this literature set and what is the relationship between leadership and health equity in these studies? The responses to these questions are reflected through a series of data visualizations and thematic presentations.

The dissertation concludes with a discussion of the findings and a set of considerations for practice, theory, policy, education, and research. These considerations are intended to provide

a foundation for the development and support of public health leaders and leadership to address the determinants of health and advance health equity.

Acknowledgements

Embarking on and completing a PhD is a long and at times an arduous process. It is also exciting and extremely satisfying. Even though the process is lonely at times, one does not achieve this level of academic achievement alone. There were many who supported me and to whom I am very grateful. First, I acknowledge the encouragement and guidance provided by my supervisor, Dr. Pammla Petrucka and co-supervisor, Dr. Marlene Smadu. Dr. Adeline Falk-Rafael, Dr. Lynnette Leeseberg Stamler and Dr. Cory Neudorf are acknowledged for their consistent wisdom and encouragement as members of my supervisory committee. This committee of outstanding community health scholars and carers were unwavering in their belief in the value of my research and freely shared their practical scholarship. Together they provided essential insight, debate, challenge and support as I made my way through the journey of doctoral studies. I am also very thankful to Dr. Donna Ciliska for her timely and at times ‘break through” insights in terms of research methodology.

I am blessed by the members of my ‘community’ of friends and colleagues who have enriched my thinking and listened to my struggles and triumphs. I am very grateful to them as I truly believe I would not have been able to complete the PhD journey without them. They walked with me and patiently encouraged my thinking, critical analysis and writing. I also extend gratitude to those who participated in the validation portion of the research.

Finally my family, husband Terry, children Kate, Gavin, Kyla, Stephanie and Jay, son in law Craig and grandchildren Cole and Connor, deserve my deepest appreciation. Thank you for your love and your belief in me. I am truly grateful.

Dedication

I dedicate this work to my mother, Ruth McGavin, for her love and for instilling in me the value of lifelong learning, a belief in hard work and a dedication to setting and achieving goals and to my mother-in-law, Joyce Betker, for believing in me and supporting my efforts in nursing, family, and community.

I also dedicate it to public health leaders (past, present and future) who, as a manifestation of their caring, work tirelessly with communities for health equity and social justice as the "most enduring legacy of any public health leader springs from honoring and creating a renewed sense of community" (Koh, 2009, p. S16).

Contents

Permission to use i

Disclaimer i

Abstract ii

Acknowledgements iv

Dedication v

Contents vi

List of Tables xi

List of Figures xii

CHAPTER 1 – Introduction 1

- 1.1 Background and Context 1
- 1.2 Problem Statement 4
- 1.3 Research Question 5
- 1.4 Research Design 6

CHAPTER 2 – Review of the Literature 8

- 2.1 Introduction 8
- 2.2 Conceptual Review 9
  - 2.2.1 Health equity 9
  - 2.2.2 Social determinants of health 11
  - 2.2.3 Public health 13
- 2.3 Leadership 15
  - 2.3.1 Describing leadership 16
  - 2.3.2 Elements of leadership 17
  - 2.3.3 Leadership and management 23

2.4 Application of Leadership Theory to Public Health 24
2.4.1 Transactional–transformational–transcendent leadership 25
2.4.2 Five practices of exemplary leadership 30
2.4.3 Complexity leadership theory 31
2.5 Leadership Development 35
2.6 Public Health Leadership 36
2.7 Summary 45
CHAPTER 3 – Method and Research Approach 47
3.1 Background 47
3.2 Rationale to Support a Scoping Review 47
3.3 Scoping Review Framework 53
3.4 Research Design 54
3.5 Method 55
3.5.1 Research problem (Phase 1) 56
3.5.2 Search strategy (Phase 2) 57
3.5.3 Search outcome and study selection (Phase 3) 60
3.5.4 Charting the data (Phase 4) 67
3.5.5 Collating, summarizing, and reporting the results (Phase 5) 69
3.5.6 Validation with key stakeholders (Phase 6) 71
3.5.7 Qualitative synthesis (Phase 7): Advancing the methodology 72
CHAPTER 4 – Findings 77
4.1 Study Characteristics 77
4.2 Research Questions, Design, and Theoretical Frameworks 78
4.2.1 Research questions 78
4.2.2 Research design 79

4.2.3 Theoretical frameworks ... 88

4.2.4 Interventions and outcomes ... 89

4.3 Aspects of Public Health Leadership to Advance Health Equity ... 94

4.3.1 Leadership attributes ... 94

4.3.2 Relational aspects ... 99

4.3.3 Knowledge of the leader ... 102

4.4 Tools, Strategies, and Mechanisms to Support or Develop Public Health Leadership ... 103

4.4.1 Policy and program development and implementation ... 103

4.4.2 Accreditation, quality improvement, and evaluation ... 104

4.4.3 Workforce and practice development ... 104

4.4.4 Processes, structures, and service delivery models that support collaboration, partnership, and engagement with communities and other sectors ... 104

4.4.5 Access to and sharing of evidence, research, and information about the community and/or population ... 105

4.4.6 Conceptual and theoretical frameworks that guide decision making and action ... 105

4.4.7 Community-based participatory research for capacity building as a strategy for capacity building ... 105

4.4.8 Active discussion and discourse about values, ideology, and politics ... 105

4.5 How are leaders developed or supported? ... 106

4.6 Validation of the Findings: Survey Results ... 108

4.6.1 Aspects of leadership ... 109

4.6.2 Tools, strategies, and mechanisms to support or develop public health leadership ... 122

4.7 Findings from the Metasummary ... 129

4.7.1 Individual level ... 132

4.7.2 Organizational level ... 133

4.7.3 Community and system level ... 134

4.7.4 Bridging and enabling 136
4.7.5 Values 138
CHAPTER 5 – Discussion 140
5.1 Research Questions, Design and Theoretical Frameworks 140
5.2 Aspects and Description of Public Health Leadership to Advance Health Equity 145
5.2.1 Aspects of leadership 146
5.2.2 Description of leadership 155
5.3 Tools, Strategies, and Mechanisms to Support or Develop Public Health Leadership 160
5.4 Recommendations for Further Research 160
5.5 Limitations 162
5.6 Conclusion and Considerations 163
5.6.1 Practice 165
5.6.2 Theory 167
5.6.3 Policy 168
5.6.4 Research 169
5.6.5 Education 169
5.7 Summary 171
References 174
Appendix A – Search Strategy 199
Appendix B – Working Definitions of Core Concepts 201
Appendix C – DistillerSR™ Examples 203
Appendix D – Excerpts from Researcher's Journal (photographs) 205
Appendix E – PRISMA Flow Diagram for Screening Process 206
Appendix F – Application for Behavioural Research Ethics Review 207
Appendix G – Participant Information and Consent Form 208

Appendix H – Ethics Review Exemption Letter 211

Appendix I – Survey Invitation 212

Appendix J – Survey Questionnaire 214

Appendix K – Survey Attachment: Summary of Scoping Review 223

Appendix L – Template for Data Extraction 229

Appendix M – Data Coding Process (photographs) 233

Appendix N – Studies Included in the Scoping Review 234

Appendix O – Summary of Included Studies: Research Questions, Methods, and Design 238

List of Tables

Table Number | **Page Number**

3-1. Comparison of Systemic Reviews and Scoping Reviews of the Literature 52
3-2. Summary of Scoping Review Phases 54
3-3. Inclusion and Exclusion Criteria 63
3-4. Summary of Screening Process and Results..66
4-1. Summary of Research Methods Used in the Included Studies...80
4-2. Summary of Health Inequity Descriptions in the Included Studies 87
4-3. Summary of Outcomes Reported in the Included Studies...92
4-4. Summary of Outcome Levels in the Included Studies 93
4-5. Summary of Leadership Aspects Identified in the Included Studies...98
4-6. Summary of Leadership Development and Support in the Included Studies.........................107

List of Figures

Figure Number **Page Number**

3-1. Flow chart of screening process for inclusion and exclusion 67

4-1. Word cloud for research purpose and questions in the included studies 79

4-2. Word cloud for theoretical frameworks used in the included studies 88

4-3. Average agreement scores for leadership attributes 115

4-4. Average agreement scores for relational aspects of leadership 118

4-5. Average agreement scores for leadership knowledge 121

4-6. Average agreement scores for tools, strategies, and mechanisms 129

4-7. Number of data elements extracted from the included studies 130

4-8. Word cloud for 510 data elements from the included studies 131

4-9. Word cloud for individual level in the included studies 132

4-10. Word cloud for organizational level in the included studies 134

4-11. Word cloud for community and system level in the included studies 135

4-12. Word cloud for bridging/enabling in the included studies 137

4-13. Word cloud for values in the included studies 138

CHAPTER 1 – Introduction

1.1 Background and Context

Public health focuses on the social, economic, and physical factors that influence the health of individuals, families, and populations. The term *public health* was "coined in the early 19th century to distinguish actions governments and societies – as opposed to private individuals – should take to preserve and protect the people's health" (Krieger & Birn, 1998, p. 1605). Last (2007) provided a foundational description of public health as an "organized activity of society to promote, protect, improve, and when necessary, restore the health of individuals, specified groups, or the entire population" (p. 306).

Public health can be considered as a form of practice, a health or social institution, an arm of government, a concept, and a set of scientific and professional disciplines (Last, 2007). Most often, the term public health refers to the part of the health system that is responsible for a range of services, policies (including programs), and strategies that fulfill the generally accepted public health functions of population health assessment; health surveillance, promotion, and protection; disease and injury prevention; and emergency preparedness and response (Public Health Agency of Canada, 2008). While governments have responsibility to ensure these functions are fulfilled, they cannot do this alone. Therefore, as Bailey and Dal Poz (2010) defined public health, it is "collaborative action to improve population-wide health and reduce health inequalities" (p. 494). The collaborative action occurs within the health sector, between government departments, with other sectors, and with members of society.

The National Collaborating Centre for Determinants of Health (NCCDH) is one of six knowledge translation centres established in 2005 and funded by the PHAC, as part of the Government of Canada's commitment to renew and strengthen public health in Canada. The six

centres “synthesize, translate and share knowledge, making it useful and accessible to policy-makers, program managers and practitioners. They identify knowledge gaps, stimulate research in priority areas, and link public health researchers with practitioners to build strong practice-based networks across Canada” (PHAC, 2014, para. 2).

Leadership was identified as an important factor to advance health equity in the findings of two recent NCCDH environmental scans (2011, 2014). For example, 75% of respondents in an online survey agreed that strong public health leadership is needed to address the social determinants of health and advance health equity (NCCDH, 2011). This finding was further supported by focus group participants who reported that there is effective leadership within those organizations that have moved ahead in this area (NCCDH, 2011). However, there are challenges. Key challenges identified by participants included “lack of clarity regarding what public health should or could do; a limited evidence base; preoccupation with behaviour and lifestyle approaches; bureaucratic organizational characteristics; limitations in organizational capacity; the need for leadership; more effective communication; and supportive political environments” (NCCDH, 2011, p. ii).

A significant finding of the earlier environmental scan (NCCDH, 2011) was that public health needed to play a stronger leadership role to advance health equity and, more specifically, that role needed to be considered in the practice context at the individual, organizational, community, and system levels. Of relevance to this scoping review, the role of public health leaders described in the environmental scan included taking organizational action on health determinants at local, organizational, and system levels; setting priorities; allocating (or reallocating) resources; modelling required behaviours (and attitudes); building partnerships; and monitoring the implementation of services, programs, and policies (NCCDH, 2011).

Public leadership has been defined as "the process of persuasion or example by which an individual induces a group to pursue objectives held by the leader or shared by the leader and his or her followers" (Gardner, 1993, p. 1). More specifically, public health leadership is described as:

> the ability of an individual to influence, motivate, and enable others to contribute toward the effectiveness and success of their community and/or the organization in which they work. It involves inspiring people to craft and achieve a vision and goals. Leaders provide mentoring, coaching and recognition. They encourage empowerment, allowing other leaders to emerge. (PHAC, 2008, p. 12)

Butler-Jones (2008), in his report on the health status of Canadians, argued for strengthened public health leadership as critical to advancing health equity. Even with significant agreement regarding the priority of public health leadership, there was little consensus or available evidence about effective public health leadership practices and the factors that supported or limited leaders (NCCDH, 2013b).

In 2014, the NCCDH repeated the environmental scan and found, while there had been improvement in the area of action to advance health equity, there was a persistent lack of broad, sustained efforts and actions across Canada, and the leadership shown by public health was far from consistent. Relevant findings included a sense there was an increased number of visible champions for health equity and a strengthened commitment to health equity action at all levels of the public health sector as seen in published strategies, standards, and policy documents, and political commitments (NCCDH, 2014). Where there had been change or action in this area, it was reported to be related to the presence of "passionate and courageous leadership at the local, regional, and provincial/territorial levels" (NCCDH, 2014, p.7).

1.2 Problem Statement

Health inequities are systematic health differences across a population, socially produced, and considered unfair (Whitehead & Dahlgren, 2006). Health equity is defined as the "the absence of avoidable or remediable differences among populations or groups defined socially, economically, demographically, or geographically" (World Health Organization [WHO], n.d.-b, para. 6). An approach to advancing health equity recommended by the WHO's Commission on the Social Determinants of Health (CSDH) (WHO CSDH, 2008b) was to address the social determinants of health that are responsible for the majority of health inequities that exist between and within countries. Significant challenges to achieving health equity exist in neighbourhoods, communities, and countries around the world due, in part, to the lack of response (political and otherwise) to persistent increasing economic and social inequalities (Marmot, 2015). Health inequities are a pressing and growing public health issue locally, nationally, and globally (Marmot, 2015; Rafael, 2016; Solar & Irwin, 2010), and addressing these inequities is a matter of social justice (WHO CSDH, 2008b).

Literature to guide the development or practice of public health leadership to advance health equity at an individual, organizational, or system level is limited, and much of what exists is theoretical and opinion. Empirical evidence is difficult to find. So, while there is significant agreement that public health leadership to advance health equity is a priority area, the evidence basis is not readily apparent. Thus, the aim of this scoping review was to consider the published research studies on public health leadership to advance health equity in order to identify strengths and gaps in the literature and research evidence base. Further, this scoping review examined public health leadership from the perspective of research studies that examined health equity interventions and identified outcomes.

1.3 Research Question

The research question that guided the scoping study was: *What aspects of public health leadership to advance health equity have been considered by research?* The term *aspects* was used intentionally to be broader than attributes of the individual leader. It is defined as the nature, quality, or characteristics of something and includes the way in which a thing is viewed or regarded (Aspect, n.d.). There has been much focus on the competencies of the individual public health professional in Canada (PHAC, 2008), at a discipline level with discipline-specific competency development, and recently with the development of competencies for public health leadership in Canada (Community Health Nurses of Canada [CHNC], 2015).

The intention of this scoping review was to be broader and to consider the complex aspects of public health leadership examined in the extant research literature.

The objectives for the scoping review were to:

1. Identify the "extent, range, and nature" (Arksey & O'Malley, 2005, p. 21) of research studies examining public health leadership to advance health equity, and thereby identify strengths and gaps;
2. Identify, compare, and contrast the research questions, methods, and theoretical frameworks used;
3. Gain an understanding of the aspects and description of public health leadership at the individual, organizational, and system level; and
4. Identify tools, strategies, and mechanisms used to support public health leadership to advance health equity.

1.4 Research Design

A scoping review "involves the synthesis and analysis of a wide range of research and non-research material to provide greater conceptual clarity about a specific topic or field of evidence" (Davis, Drey, & Gould, 2009, p. 1386). A scoping review is useful to identify key concepts and gaps in the research as well as the types and sources of evidence available to inform practice, policy making, and research on a particular topic or research area (Daudt, van Mossel, & Scott, 2013). Scoping reviews use similar rigour and steps used in systematic reviews.

The scoping review methodology was relevant for use with an emerging and diverse evidence and knowledge base such as this topic. A scoping review is typically undertaken to examine research activity in an area, summarize and disseminate research and evidence, identify gaps in research, and inform the decision to undertake a systematic review (Arksey & O'Malley, 2005). While a scoping review is iterative, conceptual, and interpretive, traditional rigorous systematic review methods were used to conduct a comprehensive search and retrieval of the published literature on public health leadership to advance health equity. Nine electronic databases were searched. As well, a search for and retrieval of potentially relevant grey literature were conducted using rigorous, accepted methods.

The initial search, in 2012, located 5,546 potentially relevant articles, including primary studies and literature reviews. The search of the peer-reviewed and grey literature was updated in October 2013, July 2014, and again in July 2016, and, after duplicates were removed, a total of 7,861 potentially relevant articles were imported into systematic review software (Distiller SR™). Following five rounds of review, 27 articles were identified as eligible for inclusion in the scoping study. Data were extracted from the 27 studies using a form developed for this

purpose in DistillerSR™. Data were mapped to three analysis questions posed to guide data collation and analysis:

1. What research questions, designs, and theoretical frameworks are used to understand public health leadership to advance health equity?
2. What aspects of leadership are present in this literature set?
3. What tools, strategies, or mechanisms are used to support or develop public health leadership to advance health equity?

As the consultation or validation phase of the scoping review, an online survey was conducted with 13 senior public health leaders who were asked to indicate their level of agreement with the preliminary findings from the analysis of the included studies. The respondents validated and added depth to the findings of the scoping review. Following completion of the six phases of the scoping review framework developed by Arksey and O'Malley (2005), another phase was conducted to answer two additional questions that arose during the earlier phases. The questions used to guide Phase 7 included: How is leadership described in the included studies? and What is the relationship between leadership and outcomes in these studies? A metasummary process including thematic analysis was used to synthesize additional, more detailed data extracted from the 27 included studies.

The following paper will provide a review of the relevant literature to set the context for the scoping review, describe the method used for the scoping review and metasummary, present the findings, and, finally, discuss the findings with conclusions and considerations for practice, theory, policy, research, and education.

CHAPTER 2 – Review of the Literature

"Leadership is one of the most observed and least understood phenomena on earth."

James MacGregor Burns (1978, p. 2)

2.1 Introduction

This chapter offers a review of the literature on public health leadership to advance health equity to set the context for the scoping review. A comprehensive review of the literature provides an understanding of current knowledge, issues, and gaps in the published literature (Cronin, Ryan, & Coughlan, 2013). It provides the foundation for the research study being planned. The review of the literature broadly sought to review the concepts of health equity, social determinants of health, public health, leadership, and public health leadership.

Given the focus and methodology of this research study considering public health leadership's role to advance health equity, this chapter begins with a conceptual review to explore and critically position the key concepts of health equity, social determinants of health, and public health. The focus then shifts to leadership and examination of key elements of leadership as well as the distinction between leadership and management. Leadership literature ranging from classic to contemporary and generic to specific is reviewed to provide a context for consideration of public health leadership. Several theoretical approaches to leadership are described and critically reviewed in terms of their application to public health leadership to advance health equity. The chapter concludes with a critical examination of public health leadership literature, how it has been described, its relationship to advancing health equity, and gaps in the literature.

The literature reviewed comes from peer-reviewed journals, books, and other publications, as well as material found on organizational websites contributing to the evidence

base to guide public health leadership, health policy, practice, research, professional development, and education. This literature review informed the undertaking of the research study, a scoping review, including the formulation of the research question and methodological selection and adaptation. It also informed the analytical framework used to gather, analyze, and synthesize the information generated through the scoping review.

2.2 Conceptual Review

The concepts of health equity, social determinants of health, and public health are reviewed and critically analyzed with specific attention to the public health context. Contemporary and emerging understanding of the concepts and their interrelatedness is provided as well as an analysis of current challenges and opportunities specific to public health organizations and practitioners.

2.2.1 Health equity

The WHO Constitution states that "the highest standards of health should be within reach of all, without distinction of race, religion, political belief, economic or social condition" (WHO, 1946, p. 1). Seventy years later, this principle persists and inspires a public health context in which every person should have the opportunity to enjoy the best health possible.

Health equity, as a principle, requires a commitment to reduce differences in health and in its determinants that are avoidable or remediable (Braveman, 2014). The determinants of health are the personal, social, economic, and environmental factors that influence or determine the health status of individuals and populations (NCCDH, 2011; PHAC, 2008; WHO CSDH, 2008b). The WHO Constitution enshrines the "highest attainable standard of health as a fundamental right of every human being" (WHO, 1946, p. 1). Further, the WHO (n.d.-c) stated that the "right to health" in international human rights law is an "inclusive right extending not

only to timely and appropriate health care but also to the underlying determinants of health" (para. 2). The *Declaration of Alma-Ata* (WHO, 1978), *The Ottawa Charter for Health Promotion* (WHO, 1986), and *The Bangkok Charter for Health Promotion in a Globalized World* (WHO, 2005)—all agreed to by the global health community—recognize the right to health as foundational in the pursuit of health equity.

Pursuing health equity requires a reduction in the excess burden of ill health among socially and economically disadvantaged populations, while simultaneously improving the health outcomes for all population groups (Whitehead & Dahlgren, 2006). Health equity is achieved through "the fair distribution of resources needed for health, fair access to the opportunities available, and fairness in the support offered to people when ill" (Whitehead & Dahlgren, 2006, p. 5). Therefore, advancing health equity necessarily requires efforts to increase access to opportunities and environments that support health and well-being for all.

Health inequalities can be defined as differences in health status or in the distribution of health determinants between different population groups (WHO, n.d.-b). Whether one ascribes to an inequity or inequality lens will determine the nature of actions taken. In other words, it requires a judgement as to whether the action is taken to address the health determinants or outcomes (inequality) or whether it is taken to improve access to the resources needed to improve and maintain health (inequity).

Health inequities, the focus of this discussion and research, are health differences that are systematic across a population, socially produced, and considered unfair (Whitehead & Dahlgren, 2006). As such, they "entail a failure to avoid or overcome inequalities that infringe on fairness and human rights" (WHO, n.d.-a, para. 1). In other words, health inequalities, or differences, that by reasonable means could be avoided are considered to be health inequities

(Marmot, 2013; Marmot, Friel, Bell, Houweling, & Taylor, 2008). Inherent in this view is a judgement made from a set of values held by those in power. Action to "redress inequities must typically go beyond remedying a particular health inequality and also help empower the group in question through systemic changes, such as law reform or changes in economic or social relationships" (WHO, n.d.-a, para. 3). Health inequities are a pressing public health issue locally, nationally, and globally (Solar & Irwin, 2010), and addressing these inequities is a matter of social justice (WHO CSDH, 2008b).

The Canadian Nurses Association (2010) defined social justice as the "fair distribution of society's benefits and responsibilities and their consequences" (p. 13). Social justice emphasizes working with people, groups, and communities to enable them to gain as much control as possible over their lives, and to ensure that control is equitably distributed so people are best able to influence their own health and that of their families, neighbourhoods, and communities (Coote & Angel, 2014). Horton (2011) stated that "public health is the science of social justice" (p.23). Social justice efforts and those to promote health equity are not limited to political or policy levels. Witnessing social injustice downstream in communities and neighbourhoods creates the leadership opportunity and imperative to advocate for and work toward health equity upstream (Falk-Rafael & Betker, 2012b).

2.2.2 Social determinants of health

The social determinants of health are understood to be "the circumstances in which people are born, grow up, live, work and age, and the systems put in place to deal with illness. These circumstances are, in turn, shaped by a wider set of forces: economics, social policies, and politics" (WHO CSDH, 2008b, p. 1). The social determinants of health account for the majority of health inequities that exist between and within communities, and taking action to address them

is viewed as key to advancing health equity (WHO CSDH, 2008b). In Canada, the social determinants of health are considered to "include income and social status; social support networks; education; employment/working conditions; social environments; physical environments; personal health practices and coping skills; healthy child development; gender; and culture" (PHAC, 2016). Indigenous ancestry, immigrant status, race, disability, food security, geography, social safety net, and health care services are other social determinants of health relevant to Canadians (Raphael, 2016). Raphael (2016) proposed criteria to identify relevant social determinants of health, including importance to the health of Canadians, understandable to Canadians, and exhibiting clear policy relevance to decision makers and citizens. At the core of this dialogue is recognition that the social determinants of health intersect and interconnect, creating complexity of understanding and action. Addressing and working to reduce health inequities is fundamental to the work of public health at individual practitioner, organizational, community, and system levels.

The evidence strongly supports the correlation between socioeconomic status and health outcomes, whether as an aggregate measure of health or in terms of a specific condition (Braveman, Egerter, &Williams, 2011; Marmot, 2013; WHO CSDH, 2008b). The consequences of not addressing these structural and social determinants is to further disadvantage populations and communities through substandard conditions, nutrition, education, and, ultimately, quality and quantity of life (PHAC, 2011; WHO CSDH, 2008b). Unequal distribution of health across a population influences how the determinants are addressed because a health gradient is attributable to inequality, not simply a gap in a single determinant of health such as inadequate income (Marmot, 2015). Linear, singular solutions, while used over many decades, have proven inadequate in addressing these complexities, and, although the literature is replete with

descriptions of such efforts, there is limited evidence of the effectiveness of these interventions (Tirilis, Husson, DeCorby, & Dobbins, 2011).

Some of the difficulty in determining actions to address inequities is language, with different countries using different terminology for health inequities. In some cases, the terms *disparity* or *fair* are used, and, in others, the terms *equality* and *inequality* are used, adding to the complexity and confusion of this dialogue. For example, when initially used, the term *disparity* was intended to describe differences in the health of "members of disadvantaged racial/ethnic groups and economically disadvantaged people within any racial/ethnic group" (Braveman, 2014, p. 6), but the nuances and inconsistent applications of this term have led to misattribution, at best, and inaction, at worst.

There is evidence that at the local, organizational, and global levels there is an appetite and willingness to support actions to address the social determinants of health and advance health equity. Within the *Rio Declaration* there is a political commitment to the global implementation of a social determinant of health approach to reduce health inequities (WHO, 2011). The document invited each member state to commit individually or collectively to five areas for action: health and development governance, participatory policy making, health sector reorientation, international collaboration, and monitoring of progress and accountability. This declaration has thrown down the gauntlet for catapulting the social determinants of health to the forefront of awareness, practice, policy, and research in the struggle to eradicate health inequities.

2.2.3 Public health

Public health is a complex array of programs, services, policies, legislations, and regulations developed or provided by governments and other sectors that have a common focus

to keep the whole of the population or society healthy (Butler-Jones, 2008). It focuses on the social, economic, and physical factors that influence the health of individuals, families, communities, and populations. Public health is commonly defined as the art and science of promoting and protecting good health and preventing disease, disability, and premature death (APHA, 2016; Last, 2007). Further, it is described as an "organized activity of society to promote, protect, improve, and when necessary, restore the health of individuals, specified groups, or the entire population" (Last, 2007, p. 306). Using a combination of science, knowledge, skills, and values, public health requires collective action by society, collaborative teamwork of an interdisciplinary team, and effective partnerships with all levels of government (Last, 2007).

Public health, at its roots, is holistic and systemic. Hence, it encompasses all organized measures, public and private, used to prevent disease, promote health, and prolong life of a population as a whole (WHO, n.d.-d). It aims to provide, create, or support the conditions in which people can be healthy. The efforts and activities of public health, especially public health nurses, are broad and occur at multiple levels from the individual to family, aggregate, community, and societal levels (Bekemeier, Walker, Linderman, Kneipp, & Zahner, 2015; CHNC, 2011; CPHA, 2010; Keller, Strohschein, & Schaffer; 2011). Public health is both practical and philosophical—essentially a way of practicing as well as a way of thinking about and addressing issues that affect the health of populations (Butler-Jones, 2008; Last, 2007). Public health is the only sector of the health system that has the whole population as its focus and, over the last century, has been responsible for marked gains in life expectancy and reductions in infectious disease mortality (Galea & Annas, 2016). Therefore, as Bailey and Dal Poz (2010) defined public health, it is "collaborative action to improve population-wide health

and reduce health inequalities" (p. 494). The collaborative action occurs within the health sector, between and among government departments, with other sectors, and with members of society.

Public health organizations struggle to identify what action to take to address the social determinants of health and advance health equity. Key barriers to action include a lack of clarity in terms of action, a limited evidence base regarding what works, organizational characteristics and capacity, non-supportive political environments, and a need for leadership (NCCDH, 2011). Despite public health's history (distant and recent), its contribution to the social determinants of health and health equity is not well documented (NCCDH, 2011, 2014). In fact, even within progressive public health organizations, action to address the social determinants of health is at an early stage of implementation (NCCDH, 2011). The lack of progress is attributed, in part, to a lack of effective leadership (Gatherer, Fraser, Hayton, & Moller, 2010; Graham, 2010). While a renewed commitment to public health leadership coupled with a concerted effort to develop and support public health leaders is called for (Begun & Malcolm, 2014; CHNC, 2015; CPHA, 2001; Koh, 2009; Rowitz, 2014), the type of leadership required has not been well examined (Srinivasan & Holsinger, 2012) and therefore remains unclear. To set a context in which to examine evidence in the literature to inform public health leadership, the next section considers leadership generally.

2.3 Leadership

Leadership is among the most complex of human constructs (Bass & Riggio, 2006). Highlighting its importance almost 40 years ago, J. M. Burns (1978) wrote that a universal craving "of our time is a hunger for compelling and creative leadership" (p. 1). While leadership is one of the most observed phenomena in the world, it is among those that are the least understood (J. M. Burns, 1978). The focus of this part of the literature review is to generally

examine the research and theoretical literature on leadership from classic to contemporary and generic to specific. The intent is to provide a context for consideration of public health leadership literature. Key elements of leadership are critically reviewed in terms of their relationship with public health, as are selected leadership theories and ways to develop and support leaders. The chapter concludes with a summary of gaps in the research literature pertaining to public health leadership.

2.3.1 Describing leadership

While, historically, the focus of leadership literature was to study or describe the individual leader, in particular males in the United States working in large private-sector organizations, the recent focus has significantly shifted. Leadership is no longer described solely as attributes or characteristics of an individual but rather as shared, distributed, relational, complex, social, situational, and dynamic, with a focus on followers, peers, supervisors, organizations, settings, and culture in addition to the leaders themselves (Avolio, Walumbwa, & Weber, 2009; Goffee & Jones, 2000). Research into leadership theory began in the early 1920s and the first leadership theory posed was trait theory, which, as its name implies, identified the traits of effective leaders (Goffee & Jones, 2000). Underpinning this theory was the belief that people are born with qualities and traits that predispose them to leadership roles and excellence. This theory, now considered somewhat narrow and limited, yielded a series of lists of characteristics of leaders. Although Zaccaro (2007) challenged trait-based perspectives of leadership, he proposed a list of “proximal” and “distal” clusters of attributes of a leader. Proximal attributes most closely relate to the environment and include expertise, knowledge, communication, and problem-solving skills. The more distal attributes include values, cognitive abilities, and personality of the leader (Zaccaro, 2007).

J. M. Burns (1978) defined leadership as "leaders inducing followers to act for certain goals that represent the values and the motivations—the wants and needs, the aspirations and expectations—*of both leaders and followers*" (p. 19). In his review, almost 40 years ago, he found more than 130 leadership definitions but also a paucity of useful theories on what distinguishes effective and ineffective leaders. More recently, Grossman and Valiga (2012) stated that leadership is a complex phenomenon that "many know when they see it, but few can define clearly" (p. 2).

Seeking more clarity on leadership theory, Grossman and Valiga (2012) examined contemporary theories of leadership and concluded that effective leadership is dependent on the person of the leader, the situation at hand, and the qualities of those who follow. Further, they posited that effective leadership is visionary and intentional and requires skilled communication, change to make the vision a reality, empowerment, and ongoing support and development of those involved.

2.3.2 Elements of leadership

Through an extensive literature review, Grossman and Valiga (2012) identified a number of fundamental elements of leadership that recurred across definitions and descriptions of leadership. Included were vision, communication skills, stewardship, change, and developing and renewing followers. J. M. Burns (1978) highlighted the importance of values to effective leadership. This section will look more closely at the key elements of vision, values, communication, relationships, and change and empowerment as they apply to leadership generally and public health leadership specifically.

Vision

Leaders have, create, and express vision. A vision unifies and focuses energy and points toward solutions (Gardner, 1990). Through vision, power and influence is created (Wheatley, 2006). The importance of vision to effective leadership is clear in the leadership literature (J. M. Burns, 1978; Dickson, 2007; Gardner, 1989; Grossman & Valiga, 2012; Kouzes & Posner, 2012; Wheatley, 2006). Most leaders, including public health leaders, work in environments replete with complex and political situations, where clear vision for advocacy, political engagement, and local policy development is essential (Smith et al., 2015). Core to public health leadership is having a strong vision, one that is grounded in a strong belief in possibilities for the future, hope, and optimism for positive social change (Rowitz, 2014). Fried, Piot, Frenk, Flahault, and Parker (2012) describe a vision of accomplishing health for populations as a "platform of science, evidence, experience, matching solutions to needs, shared knowledge and a commitment to equity – translated into practice" (p. S7). Addressing contemporary issues, such as health inequities through action on the social determinants of heath, requires a commitment by public health leadership to knit and align disparate views into a common vision and mission (Koh, 2009). This type of leadership combines passion with compassion and taps into clinical and public health knowledge.

Values

J. M. Burns (2003) saw values as "power resources" and at the core of transforming leadership: "values strengthen leaders' capacity to reach out to wider audiences and … clarify the relations between individualism and collectivism, self-interest and altruism, liberty and equality" (p. 212). Further, a set of relevant and explicit values informs the roles, actions, style,

and commitment of leaders (J. M. Burns, 1978). Gardner (1990) stated that a healthy society celebrates its values and public leadership can revitalize those shared beliefs and values.

A key responsibility of public health leadership is ensuring the core concepts of human rights and social justice are central in planning and implementing programs, services, and policies, specifically through a focus on those at the margins of society (Fried et al., 2012; Gatherer, et al., 2010; Horton, 2011). Critical public health values include social justice, reliance on evidence, interdependence, respect, community self-determination, requisite role of government, and transparency (Begun & Malcolm, 2014). In Canada, important values in public health include "a commitment to equity, social justice and sustainable development, recognition of the importance of the health of the community as well as the individual, and respect for diversity, self-determination, empowerment and community participation" (PHAC, 2008, p. 3).

The values and culture of public health organizations shape if and how they act on the social determinants of health to advance health equity (Annett, 2009; Cohen et al., 2013; Dickson, 2007). The stronger the value system in an organization, the greater level of empowerment is experienced by its leaders, potentiating greater opportunities for the leaders to effect empowerment with others. Values inform the way a public health organization relates to communities, how goals and priorities are set, and how it conducts its work. With social justice and equity as core values, the public health sector in Canada is well situated to lead in addressing persistent inequities in health between socially disadvantaged groups and the general population (Cohen et al., 2013).

Communication

Effective leadership relies on well-honed communication skills, in which effective listening is an important aspect. Bass and Riggerio (2006) described the importance of a two-

way exchange in communicating and engaging with followers or those with whom the leader interacts. To communicate a vision, engage others to see the relevance of the vision, and inspire people to contribute their passion on behalf of the group is the work of effective leaders (Grossman & Valiga, 2012).

Gardner (1990) identified that public leaders are able to find appropriate words, they teach, and they are able to effectively access the media and other sectors (i.e., journalists, writers, advocacy groups, civil society) that can circulate critical ideas and solutions. Communicating with a wide variety of audiences; building effective interdisciplinary teams; and developing networks, coalitions, and partnerships are essential contemporary leadership skills in health care and public health (Dickson, 2007). Koh (2016) identified communication skills as well as skills in negotiation and conflict resolution as indispensable to a public health leader. Public health leaders, even in the most senior strategic roles, are part of teams and need to have excellent communication skills and need to collaborate to be effective (Smith et al., 2015).

Relationships

"Leadership is about relationships" (Rowtiz, 2014, p. 466), and the most important relationships a leaders has is with followers. Effective followership is considered a building block of effective leadership, and without followers there is no leadership (Grossman & Valiga, 2012; Suda, 2014). Followership is an emerging concept, and the qualities of an effective follower include courage, credibility, and a commitment to a purpose or principle outside themselves (Kelley, 1988). Effective followers demonstrate a high degree of teamwork and are able to build cohesion amongst members (Suda, 2014). Some authors consider the use of the term *follower* to imply a hierarchical relationship and prefer terms such as *constituent* (Gardiner, 2006; Gardner, 1990). Whatever the term,

> the relations between leaders and followers and among followers … has at its affective core efficacy and self-efficacy, individual and collective, the feelings of deep self-confidence, hope and expectation that goals can be attained and problems solved through individual or collective leadership. (J. M. Burns, 2003, p. 224)

Leaders appeal to the motives of followers or constituents and, as they respond, a relationship is developed that collectively binds followers and the leader (J. M. Burns, 1978). The quality of those relationships matter as to how well collective action is taken and shared goals achieved (Kouzes & Posner, 2012).

Effective leadership requires investment in those with whom a leader works as well as support for ongoing renewal of commitment, understanding, and involvement (Grossman & Valiga, 2012; Kelley, 1988). Kelley (1988) stated the consideration of the nature and importance of followership has been overshadowed by a preoccupation with leadership. Kellerman (2007) cautioned not to consider followers as amorphous, noting that the distinctions among followers are as consequential as those among leaders. Mentoring, acting as a role model, precepting, and personal attention facilitate development of followers (Grossman & Valiga, 2012; Kelley, 1988; Kouzes & Posner; 2012). Kellerman (2007) argued for the adoption of “a more expansive view of leadership – one that sees leaders and followers as inseparable, indivisible, and impossible to conceive the one without the other” (p. 91). Being in a relationship characterized by mutuality, shared power, and collaborative, active participation is foundational to public health practice and thus leadership regardless of the primary target entity (i.e., individual, families, groups, or communities) (Falk-Rafael & Betker, 2102a).

A key feature of public health leadership is a focus on exercising external influence through partnerships and networks. However, until very recently, leadership across networks of

organizations and sectors received very little attention in the leadership literature (Taylor, 2012). Koh (2009) described an essential leader–follower interplay in public health that valued synergistic leadership functions among many and diverse contributors. Smith et al. (2015) emphasized that public health leaders must work collaboratively in a turbulent environment to build "strong collaborative networks and teams at every level … to affect constructive change in these complex health care settings, and work across disciplines effectively" (p. 182). Required is an interdependent balance of followership and leadership within and between public health systems, organizations, and practitioners (Nowell & Harrison, 2011; Srinivasan & Holsinger, 2012). These highly relational skills and actions do not reflect the technical and academic skills that public health has been traditionally founded upon, but they are those of effective public health leadership. To be effective, public health leaders need to draw on their experiential knowledge, emancipatory knowing, and political advocacy (Falk-Rafael & Betker, 2012a).

Change and empowerment

The process to achieve a vision is change, thus "leaders must understand the interweaving of continuity and change" (Gardner, 1990, p. 124). Effective leadership motivates and inspires people and, as a result, generates the energy required to cope with barriers to change (Kotter, 1990), challenge processes, and guide change (Dickson, 2007). In fact, the realization of intended change is considered the ultimate test of leadership (J. M. Burns, 1978). Aspects of a leader's role in terms of change include: to appreciate when change is needed and when the status quo is desirable; to effectively plan for change; to meaningfully involve those who are affected by the change; to support others in realizing their role in making change; and to keep a positive, solution-focused attitude in the face of challenges to the change (Grossman & Valiga, 2012; Kotter & Schlesinger, 2008). Effective leaders create a climate in which collective action

to achieve shared goals can occur, and they foster a process of renewal or change (Gardner, 1990).

Leadership is the link between intention and outcome (J. M. Burns, 2003). For real, intended, durable, and comprehensive change, the elements that make leadership a vital force in this process are creativity, conflict, empowerment, and efficacy (J. M. Burns, 2003). From this perspective, leadership, or the lack of it, contributes to whatever progress does or does not take place. “The clues to the mystery of leadership lie in a potent equation: embattled values grounded in real wants, invigorated by conflict, empower leaders and activated followers to fashion deep and comprehensive change in the lives of people” (J. M. Burns, 2003, p. 220).

2.3.3 Leadership and management

Before moving on to key relevant leadership theories, a distinction between management and leadership needs to be made. This distinction is especially important in public health because public health policy, programs, and services most often occur within or are delivered by governments. In these top-down, hierarchical, and bureaucratic structures, leadership is often ascribed to a position of authority and power, or to the person in such a position.

The terms *leadership* and *management* are often (erroneously) used interchangeably (Grossman & Valiga, 2012; Vollman, Thurston, Meadows, & Strudsholm, 2014). Management plays a role in ensuring order and consistency in daily processes in an often complex environment. Leadership, on the other hand, involves setting direction and developing strategies to effect the changes required to achieve that direction (Kotter, 1990). Grossman and Valiga (2012) examined the elements of leadership and found that leadership is a complex, multidimensional concept and more elusive than management. The steps, processes, and outcomes of management (e.g., planning and budgeting) are often more apparent.

Leadership is about vision and inspiration, setting the agenda, innovating, and challenging the status quo (Jakubowski, Donaldson, & Martin-Moreno, 2014). Management, on the other hand, tends to focus on administration and effective implementation. While leadership and management are different, they overlap, and Gardner (1990) identified several leadership tasks that have a management component, including to plan and set priorities, organize, set agenda, and, exercise political judgement. Given the complexities and challenges in today's health care environment, managers, or those in positions of authority and influence, should be required to be leaders (Grossman & Valiga, 2012). Conflation of the terms contributes to a general perception that leadership occurs from a management lens and position of authority. However, when considering public health, leadership occurs at every level of an organization and in collaboration with communities and other sectors.

2.4 Application of Leadership Theory to Public Health

In terms of developing, translating, and applying leadership theories and models, uptake in public health has been slow (Carlton, Holsinger, Riddell, & Bush, 2015a). As one wades through the plethora of contemporary leadership approaches, it is critical to consider their intent, underpinnings, relationships of leaders and followers, and engagement of communities, as well as their strengths and limitations. The following sections of the chapter provide a critical review of selected leadership theories in terms of relevance and fit with public health core values and functions.

There are a number of leadership theories that have been discussed in the literature as being useful to public health. For example, Begun and Malcolm (2014) identify integrative leadership, servant leadership, collaborative leadership, complexity leadership, and adaptive leadership as approaches and theories that are relevant to public health leadership. It is outside

the scope of this chapter to describe and critically review all or even most of the leadership theories found in the general leadership literature. Therefore, three leadership theories or frameworks will be highlighted: the three Ts of transactional-transformational-transcendent leadership theory, Kouzes and Posner's (2012) five practices of exemplary leadership, and, finally, complexity leadership theory. These were chosen as they were more often identified in recent literature than other theories as having applicability to leadership in public health. The intent, for the purpose of this dissertation, is to provide an overview rather than an in-depth analysis of the means and meanings attached to these various approaches.

2.4.1 Transactional–transformational–transcendent leadership

In 1978, J. M. Burns conceived and made a clear distinction between transactional and transforming leadership as two types of leader-follower interaction. Transactional leadership "occurs when one person takes the initiative in making contact with others for the purpose of an exchange of valued things" (J. M. Burns, 1978, p. 19). Transactional leadership relies on the ability of a leader to reinforce or influence followers. Reinforcement can be implicit or explicit and tangible or intangible (i.e., symbolic) (Bass, 1997). Transactional leadership, in which an exchange takes place between leaders and followers, represents the traditional influence model of leadership (Gardiner, 2006). This type of leadership does not focus on the professional relationship between the leader and others including their staff, team, partners, or collaborators (Moodie, 2016). Alternatively, transforming leadership relies on the leader engaging with and motivating followers to strive for and achieve higher-order outcomes (Bass, 1997; J. M. Burns, 1978).

Building on this distinction, Bass (1997) described the transactional-transformational leadership paradigm as a universally applicable model viewing leadership "as either a matter of

contingent reinforcement of followers by a transactional leader or the moving of followers beyond their self-interests for the good of the group, organization, or society by a transformational leader" (p. 130). J. M. Burns (2003) emphasized the distinction between "change" and "transform" as underpinning the theoretical evolution from transactional to transformational. To exchange or substitute one thing for another is to change and can be attributed to transactional leadership. Transform means "to cause a metamorphosis in form or structure" (J. M. Burns, 2003, p.24). In social, community, and political terms, this transformation means an alteration in entire systems and includes attitudes, values, and needs.

Transformational leadership is participatory and democratic; it involves inspiring others to commit to a common or shared vision and goals, and building leadership capacity through various means such as mentoring, coaching, and providing support (Bass & Riggio, 2006). At the heart of this paradigm is the notion that leadership occurs at all system levels and all are leaders (Avolio, Walumbwa, & Weber, 2009; Bass & Riggio, 2006). Tension occurs in the process, and it is in the tension that change takes place. In this type of leadership, followers will eclipse leaders and become leaders themselves (J. M. Burns, 2003). A moral element exists that raises the level of human conduct and performance as well as the ethical aspirations of both leader and led (Avolio, Walumbwa, & Weber, 2009; J. M. Burns, 2003). The measure of leadership success is the degree the intended effects or change are produced.

To tackle the most critical issues in the world including global poverty, J. M. Burns (2003) saw transforming leadership as essential. He described a grand, yet necessary, vision for transforming leadership, foreseeing leaders as able to empower those who are poor and to work with impoverished communities to develop self-sustaining efforts. Leadership would occur at the local community and grassroots level, by the thousands of leaders closest to those living in

conditions of poverty, leaders who are able to listen and be responsive to people and their communities.

Building on this vision, Bass and Riggio (2006) wrote that transformational leaders "promote concern for others and for society; they encourage independent, critical thinking; and they enhance followers' sense of self-efficacy and self-worth" (p. 143). As such, transformational leadership is a good fit for the complex settings and organizations of public health today where teams not only seek an inspirational leader but also want to be challenged and to feel empowered (Bass & Riggio, 2006). In this paradigm, a leader gains the trust and confidence of followers, by defining a vision and future goals, and by action to meet the goals (Moodie, 2016; Taylor, 2012). In public health, effective leaders draw from transformational skills and practices but also transactional perspectives depending on the context and situation (Rowitz, 2014). Carlton et al. (2015a) identified the need for a diverse set of leadership competencies:

> While transformational leadership qualities enable public health leaders to engage communities in efforts to improve population health, the full range of leadership qualities, including technical and managerial acumen, is necessary not only to lead change but also to effectively attend to general and regular organizational tasks and responsibilities should not be overlooked. (p. 2)

Competency models for the public health workforce include characteristics of transformational leadership, such as charisma (Carlton et al., 2015b; CHNC, 2015). Transformational leadership in public health also requires consideration of what is happening at an emotional level and understanding of the experiences of others. Carlton and colleagues (2015b) found that "leading by example and providing individual consideration to followers

were found to be more important than other leader factors, such as intellectual stimulation, inspirational motivation, or idealized attributes of leaders" (p. 5).

Other important leadership qualities identified in the Carlton et al. study (2015b) include "having a clear and competent vision of public health, being able to work collaboratively with other community agencies, and addressing the current challenges to public health with creativity and innovation" (p.5). They also found that leadership "is as much a function of the personal qualities and behaviors of individuals as it is of the positions or titles they hold" (p. 5). Public health leaders balance transformational and transactional leadership styles—leading by example, collaboratively engaging with followers, using transactional leadership when appropriate, and providing individual consideration to followers through situational-type leadership—reflecting how the daily realities of public health work necessitate various leadership styles.

Gardiner (2006) extended the transactional–transformational leadership paradigm when he described transcendent leadership. He noted that this leadership metaphor, first cited in 1995, was inspired by observation of leaders who transcended self. A transcendent leader has the ability to put the collective effort or service ahead of personal interests, and to lead from a place of wholeness or global perspective. This type of leadership is reflective, self-aware, and value-centred. Transcendent leadership requires the leader to be fully present and a skilled facilitator of dialogue (Crossan, Vera, & Nanjad, 2008; Gardiner, 2006). Alignment of three interrelated areas, environment, strategy, and organization, is required. This alignment facilitates the leader to effectively work within and across the levels of self, others, organization, and community (Crossan et al., 2008).

Koh (2009) identified transcendent leadership, with its focus on self-awareness and "leadership of self," as very relevant to individual public health practitioners, the organizations

responsible for the delivery of public health policy and programs, and the community or society as a whole. This type of leadership is consistent with the widely used definition of public health presented in the previous section as an “organized effort of society” (Last, 2007, p. 306) as well as “collaborative action to improve population-wide health and reduce health inequalities” (Bailey & Dal Poz, 2010, p. 494).

No leader has all the required skills, knowledge(s), and resources to adequately address the complexities of today’s issues, especially those of health inequities. Transcendent leaders must be aware of and address their biases, prejudices, and weaknesses (Moodie, 2016). Koh (2009) wrote that “transcendent leaders humbly understand their own biases and that their driving passions can easily blind them to the passions of others” (p. S14). He considered this view of leadership to be particularly applicable to current public health, which may be burdened with distrust for those in positions of authority, as transcendent leadership requires the leader to pay “added attention to issues of honesty, integrity, morality, transparency of goals, and consistency of words and actions” (p. S13).

Transcendent leadership has been identified as essential to move toward shared governance, which includes a climate of trust, information sharing, meaningful engagement and participation of all, collective decision making through dialogue and group processes, protection of divergent rights, and redefined roles (Gardiner, 2006). Mobilizing people and marshalling resources to a higher purpose requires the public health leader, along with others, to connect passions and compassion, align spirits, unite disparate voices, and openly collaborate to foster change (Koh, 2009). Transcendent leadership works through dialogue, shared understanding, and consensus to effect collective action and decision making (Gardiner, 2006; Moodie, 2016).

2.4.2 Five practices of exemplary leadership

This widely cited model, based on research by Kouzes and Posner (2012), describes the practices of individual leaders. The model is succinct, easy to understand, and therefore use. The five practices are briefly described below and include model the way, inspire a shared vision, challenge the process, enable others to act, and encourage the heart (Kouzes & Posner, 2012).

The first practice, to *model the way*, means to demonstrate the behaviour the leader expects of others. To do this effectively, requires self-reflection of the leader to be clear about his or her guiding principles and values as well as affirmation of the values of those with whom the leader is working. Living those values in everyday actions and behaviour communicates the leader's commitment. The second practice, to *inspire a shared vision*, starts with a dream or vision of what could be. Commitment to the vision requires leaders to inspire those around them by appealing to their aspirations and dreams. The result is shared passion for a preferred future. The third practice, to *challenge the process*, requires leaders to venture out into the unknown. Leaders scan the environment for opportunity and innovations. They are willing to take risks, generate small and frequent wins, and learn from their experiences. The fourth practice, *enable others to act*, acknowledges that leaders do not succeed alone. Change requires teamwork conducted through trust and strong collaborative relationships. Empowerment of others occurs when they have the information they need, are trusted, and have the authority to take action. Through this constituents or followers become leaders. The final practice is to *encourage the heart*. Recognizing the achievements of others and showing appreciation are key to this practice. Authentic celebrations of achievement build community spirit and foster a collective identity.

Through their extensive research, Kouzes and Posner (2012) found that "leadership is an identifiable set of skills and abilities that are available to anyone" (p. 30). They describe

leadership as a relationship between those who aspire to lead and those who choose to follow. The quality of the relationships matters, and relationships that are characterized by mutual respect and confidence are more likely to result in goals being achieved. Kouzes and Posner identified the characteristics of a leader whom people were likely to follow. These characteristics were consistently identified over time and across cultures, countries, hierarchies, genders, age groups, and levels of education. The majority of constituents believe leaders must be honest, inspiring, competent, and forward-thinking. The first three characteristics are part of the leadership foundation of credibility. The fourth characteristic, being forward-thinking, sets leaders apart and fulfills the expectation that leaders have a vision and are able to articulate the vision and the path forward (Kouzes & Posner, 2012).

Rowtz (2014) identified the leadership challenge model as one, among several, that had application to public health. Begun and Malcolm (2014) examined the five leadership practices for use in public health. While they believed this model is useful, they also contended that it is generic and does not consider some of the unique and more difficult leadership competencies required in public health, such as political acumen and the ability to execute plans in urgent and emergent situations. They concluded that the leadership challenge model would need to be customized for public health and used in combination with other leadership approaches.

2.4.3 Complexity leadership theory

"Complexity science is the study of complex adaptive systems: the patterns of relationships within them, how they are sustained, how they self-organize, and how outcomes emerge" (J. P. Burns, 2001, p. 475). Concepts of interdependency, interconnectedness, emergence and co-evolution are central to a complexity approach (Betker, MacDonald, Hill & Kirk, 2016). In leadership, complexity science provides a lens through which to understand

relationships in a system where explanations are difficult when its individual components are examined apart from the shifting and changing nature of the whole system (Uhl-Bien & Marion, 2009). In the past, situations have been viewed largely in a linear and structured manner; complexity perspectives provide new insights that recognize conditions of uncertainty and unpredictability (Davidson, Ray, & Turkel, 2011). Complexity science provides a way to examine contemporary issues that is dynamic and yields knowledge (Linderman, Pesut & Disch, 2015). Using a complexity science perspective, leadership is thus viewed as embedded in the context in which it is being enacted (Uhl-Bien & Marion, 2009).

Uhl-Bien, Marion, and McKelvey (2007) proposed Complexity Leadership Theory as a "new way of perceiving leadership—a theoretical framework for approaching the study of leadership that moves beyond the managerial logics of the Industrial Age to meet the new leadership requirements of the Knowledge Era" (p. 315). Leadership, while understood within a bureaucratic structure of planning, organizing, and missions, is considered to exist in interactions. That is, in the relationships between people within and outside the organization.

Complexity Leadership Theory describes three leadership functions—adaptive, administrative, and enabling—that are "entangled within and across people and actions" (Uhl-Bien et al., p. 305). Each function is briefly described below.

Adaptive leadership

Uhl-Bien et al. (2007) defined adaptive leadership as "emergent change behaviors under conditions of interaction, interdependence, asymmetrical information, complex network dynamics, and tension" (p. 309). They elaborated that it is not an individual act but instead a dynamic of interdependent agents. As such, it is visible in complex adaptive systems within an

organization and in the interactions between people as opposed to being considered within individuals.

Viewing leaders and followers within a linear exchange process does not fully explain the complex dynamics of leadership today (Avolio, Walumbwa, & Weber, 2009). Adaptive leadership occurs within a structured yet flexible and responsive network of people and systems where creative and adaptive knowledge is generated with sufficient significance and impact to create change in a social system (Uhl-Bien et al., 2007). For example, impact could be considered the degree to which others use knowledge or a particular idea. Change, when using this aspect of complexity leadership theory, is thought to occur in the spaces between people, communities, or systems.

Administrative leadership

Administrative leadership focuses on control and alignment and is the "actions of individuals and groups in formal managerial roles who plan and coordinate activities to accomplish organizationally-prescribed outcomes in an efficient and effective manner" (Uhl-Bien et al., 2007, p. 305). The nature of administrative leadership varies across the levels of an organization, and the actions which result impact the creativity, learning, and adaptability of those in the organization and those with whom it interacts.

Enabling leadership

Enabling leadership, the third element of complexity leadership theory, occurs at all levels of an organization and system. This type of leadership works to create the conditions for adaptive leadership to thrive by managing the entanglement of the bureaucratic (administrative leadership) and emergent (adaptive leadership) functions of an organization (Uhl-Bien et al., 2007). Enabling leadership seeks to create the necessary conditions for innovation and

adaptability, and facilitates the flow of knowledge and creativity into administrative structures. As Uhl-Bien et al. (2007) described, enabling leadership "works with adaptive and administrative leadership to decide which creative outputs of the adaptive subsystem are the most appropriate to move forward into the broader bureaucratic structure" (p. 313). In the entanglement of the three leadership functions, which sometimes can be in opposition to each other, enabling leadership facilitates the articulation of administrative and adaptive leadership. For example, Carlton et al. (2015b) found that building collaborative relationships with partners in the community was an important part of visionary public health leadership, stating that "a leader needs to have a broad vision of public health that encompasses both the public health agency and also includes the entire public health system" (p. 5).

Similar to enabling leadership, the NCCDH (2103b) found that effective public health leadership that addresses health equity links or bridges organizational action with community action. In this study, participants talked about straddling boundaries, or "crossing back and forth" between communities and their organization. Public health leaders interviewed described situations where they were unable to act within their formal public health roles. In these situations, leaders participated in building external coalitions and encouraged or supported community organizations or professional associations to advocate for health equity issues. Alternatively, public health leaders used existing structures, both in the organization and in the community, to engage partners and other sectors to address health inequities.

Effective public health leaders acknowledge and embrace complexity (Fried et al., 2012). Every day they address complex challenges rooted in multiple layers of diverse and interconnected factors. The solutions or interventions are also complex and involve intersectoral partnerships to address multiples causes from different perspectives and angles (Begun &

Malcolm, 2014). In fact, Rowitz (2014) stated that public health is an example of a complex adaptive system because, as a system, public health is carried out in a complex array of health care services in a community; focuses on emergent patterns in population health; acknowledges that individual health is influenced by interaction with social and environmental factors; makes decisions and takes action within social networks and interactions; and practices in an unpredictable political dimension that affect how issues affect communities. Public health as a system is affected by the nature and resources of its workforce, as well as by characteristics of the communities it serves.

2.5 Leadership Development

Through an integrative review of the literature, de Zulueta (2016) found that research into leadership development is predominantly related to the development of individual leaders. This focus on the development of the individual leader is consistent with general leadership literature. However, effective learning or leadership skill development best occurs in the environment in which the leadership is to be applied (de Zulueta, 2016).

The work of Day et al. (2012) envisioned a multistaged approach to the development of public health leaders. First, they recommended a priority for leadership development, specifically targeting those moving from a narrow management role to a broader public health leadership position. Second, they recommended a stronger focus on understanding and applying the constructs of power and authority. This focus must be aligned with a coherent identity for public health and its values. Finally, the lessons and good practice of public health leaders and leadership must be shared in a regular and wide fashion. The future requires leaders who are creative, transformative, and adaptive; hence, there is an urgent need to nurture and cultivate facilitators, team builders, mentors, and coaches (de Zulueta, 2016).

Fried et al. (2012) identified that, with the certainty of change, a commitment to learning is essential for effective leadership in public health. While strengthening leadership capacity within public health could positively affect the health of the public, Czabanowska, Smith, Stankunas, Avery, and Otok (2013) took exception to this approach, noting its development is outdated. They argued that, despite a pressing need for investment in public health leadership development, such development must be transformative and interdependent with every public health organization "engaged in developing more leaders at every level and creating collaborative organisational cultures" (p. 449) in which that leadership can thrive.

This review of leadership literature has provided an overview of leadership theory and focused largely on theories that emerged after the paradigm shift that occurred with J. M. Burns' (1978) landmark work that illuminated the relational nature of leadership. The final section of this chapter narrows its focus to examine public health leadership and its relationship to advancing health equity.

2.6 Public Health Leadership

Those working within public health are, for the most part, public servants, employed by governments or organizations funded by governments. As such they are public leaders. Gardner (1990) defined public leadership as "the process of persuasion or example by which an individual … induces a group to pursue objectives held by the leader or shared by the leader and his or her followers" (p. 1). While public leadership must not be confused with status, power, or official authority, it must be considered within the context in which it is exercised (Gardner, 1990). In public health, these contexts and settings are incredibly diverse, and each influences the leaders that emerge and the roles that they play. While Gardner (1990) considered there to be many forms and styles of leadership as well as diverse qualities of leaders, he observed that

generally public leaders think in the long term; grasp the relationship between a situation and the larger reality; reach out to and influence constituents (followers); emphasize values, vision, and motivation; demonstrate political skill and savvy; and take action within a context of renewal. In public health, leaders have the opportunity to provide leadership at all levels of the system. Effective public health leaders are motivated by service and are able to tap into the desire to serve in others (Begun & Malcolm, 2014). They understand public policy and the political processes by which public policy is made. They are able to use the tools of government and weather its frustrations (Begun & Malcolm, 2014).

While a systematic review of public health leadership literature was not found, two recent reviews of public leadership were located. While not specifically about public health leadership, these reviews do provide insights into the state of evidence to inform public service leadership, of which public health could be considered a subset. An overview of the findings of these recent reviews follows.

Vogel and Masal (2015) reviewed the literature on public leadership and concluded the field was still in its infancy. They found it "adheres almost exclusively to a sociology of regulation, largely disregarding more critical and emancipatory approaches" (p. 1183). They described public leadership as a social construct that rises out of the interaction between members and the organizational context. This view facilitates an understanding of public organizations, such as those that employ public health practitioners, and the way context shapes, and is shaped by, the interactions between leaders and the community. Vogel and Masal (2015) concluded that, in public leadership research, this perspective has not been sufficiently explored. The research gaps they identified include a need to shift focus to the "public" aspect of public leadership, to use a complexity approach that considers the layers of interactions at play, to focus

on public “followership” in addition to leadership, and to shift from the focus on individual leaders to the context in which public leadership is situated.

Chapman and colleagues (2016) explored the research methods used to study public service leadership and how leadership was treated in the analysis of findings. While they found that there are a growing number of empirical studies, the authors faced significant challenges in their ability to synthesize the findings across included studies. These challenges arose from the wide diversity of research methods and designs used, the array of theoretical approaches cited, and the wide variation in how findings were reported. In the literature they reviewed, the individual leader was the most common unit of analysis. While there was a general clustering around transformational and collaborative leadership approaches in the included studies, 20 distinct theories were used to frame public service leadership.

Chapman et al (2016) concluded in their review that, due to the lack of precise conceptualization of these leadership theories, the studies reviewed did not increase clarity for application in the public sector. Further, they determined that the state of public service leadership research is fragmented and emerging, and there is a lack of “a comprehensive theoretical approach to knowledge creation and empirical theory testing of public leadership (Chapman et al., 2016, p. 126).

Given the lack of a comprehensive review, how is public health leadership described in the literature? Early public health leadership was linked to scientific discoveries and the development and application of public health knowledge:

> Public health leaders who catalysed profound progress and instilled fundamental values and norms in the public health movement … [were] … often associated with innovative thinking or outstanding courage in the face of adversity, savage opposition, and the

absence of any systematically organized public health system. (Jakubowski et al., 2014, p. 267-268)

Historically, public health leadership has been associated with a position of authority such as medical officer of health or executive director; the leadership of practitioners at all levels of the system was not acknowledged. Nor was the leadership provided by members of communities and other sectors acknowledged as they worked in concert with public health practitioners and organizations. However, public health nurses have provided leadership to promoting the health of individuals, families, populations, neighbourhoods, whole communities and society. These nurses advocated for marginalized and disadvantaged populations, worked in partnership with the community and with other sectors, as well as delivered a broad range of essential health services in homes, outposts, schools, workplaces and on the street (Duncan, 2016). Their practice and leadership were influenced by the need to address the health inequities that existed then and persist today.

Consistent with that, more than two decades ago the knowledge requirements for public health leadership were identified as formal leadership education; knowledge of public health issues, organization, and programs; and training in management (Roemer, 1993).

While there is no consensus, there are many definitions of public health leadership proposed in the literature (Jakubowski et al., 2014; Koh, 2009). Jakubowski et al. (2014) proposed that public health leadership is the "deliberate process of driving fundamental progress in public health" (p. 269). They described public health leadership as operating in the community as well as other settings including civil society, politics, environment, industry, philanthropy, and the media. "Previously associated with a single person, position or institution, leadership in public health is now dispersed among local governments and communities, as well as other

stakeholders connected globally through the Internet and other modern means of communication" (Jakubowski et al., 2014, p. 267).

As with leadership generally, public health leadership can also be defined in a variety of ways, such as personal traits, roles, processes, or functions (Begun & Malcolm, 2014). Begun and Malcolm (2014) described public health leadership as "the practice of mobilizing people, organizations, and communities to effectively tackle tough public health challenges" (p. 18). Rowitz (2013) described it as "creativity in action, [with] the ability to see the present in terms of the future while maintaining respect for the past [and] a commitment to the community and the values for which it stands" (p. 5). Public health leadership is almost always described at a variety of levels, such as individual, team, organization, community, and society (Koh & Nowinski, 2010). Interestingly, a commitment to address the social and determinants of health or to advance health equity is not specifically identified, nor is the goal of health equity articulated in the definitions.

Broadly, leadership in public health is "about influence that moves individuals, groups, communities, and systems toward achieving goals that will result in better health" (Betker & Bewick, 2016, p. 27). Public health leadership in Canada is defined as:

> The ability of an individual to influence, motivate, and enable others to contribute toward the effectiveness and success of their community and/or the organization in which they work. It involves inspiring people to craft and achieve a vision and goals. Leaders provide mentoring, coaching and recognition. They encourage empowerment, allowing other leaders to emerge. (PHAC, 2008, p. 12)

While this definition is comprehensive it does not adequately address the contemporary challenges of public health including addressing the social determinants of health and promoting

health equity (Vollman et al., 2014). In their review of leadership in the competencies of seven disciplines in public health, Vollman and colleagues (2014) found an uneven recognition and description of leadership and concluded this reflected the evolving nature of the field and a lack of shared language.

In his report on the health status of Canadians, Butler-Jones (2008) argued that leadership is necessary to advance health equity. Specifically, "leaders at all levels and across all sectors of society [are needed] to act as champions, helping people to think about the contribution they can make to ensuring that all Canadians have the opportunity to achieve the best possible health" (Butler-Jones, 2008, p. 68). Public health leadership was identified as a priority area for action along with social investments; community capacity building; intersectoral action; and efforts to build, share, and sustain the required knowledge infrastructure.

The PHAC (2008) identified leadership as one of the seven domains of core competencies for public health practice in Canada. The knowledge and skills required in this domain are those that "build capacity, improve performance, and enhance the quality of the working environment … [and] enable organizations and communities to create, communicate, and apply shared visions, missions, and values" (PHAC, 2008, p. 6). The *Leadership Competencies for Public Health Practice in Canada* (CHNC, 2015) were developed through a multiphase, interdisciplinary project. The 49 leadership competency statements are organized into five categories: systems transformation, achieve results, lead self, engage others, and develop coalitions (CHNC, 2105). Carlton et al. (2015b) found that the ideal qualities of public health leaders included being inspirational and passionate, having and using good communications skills, being open to change and the influence of others, and being decisive and having good decision-making skills.

In one of the few articles that linked public health leadership and health equity, Koh and Nowinski (2010) identified that a public health leader for health equity needs to enact several key roles including cultivating interdependence (collaborative relationships and partnerships), communicating effectively, building a sense of community (empowerment), and having a focus on the social determinants of health and promotion of health equity. From this perspective, appropriate public health leadership will enable carrying out the functions associated with addressing the social determinants of health and advance health equity (Daghofer & Edwards, 2009). What is needed to tackle disparities and achieve true health equity, Koh and Nowinski (2010) argued, is "leadership—societal, organizational and individual—that embraces the powerful integration of science, practice and policy to create lasting change" (p. S9). Rowitz (2014) suggested "community collaboration leadership" as a balanced type of leadership in public health. This approach supports the work of a public health leader with many constituencies and acknowledges the outcomes of this type of leadership as ranging from community assessment to the development and implementation of community-level interventions.

Two environmental scans conducted by the NCCDH (2011, 2014) identified public health leadership as an important factor in effectively working to address the determinants of health and advance health equity. However, while there was significant agreement that public health leadership is required, there was little agreement about what aspects of public health leadership practices were effective, factors that supported and developed it, or expected impact and outcomes (NCCDH, 2013b).

The global situation today, with its complex social and health challenges, requires a diverse and multidisciplinary workforce in public health with appropriate knowledge, skills, and

attitudes (Holsinger, Carlton, & Jadhav, 2015; PHAC, 2008). Today's public health practitioner needs to be able to provide effective leadership in turbulent and rapidly changing environments (Reyes, Bekemeier, & Issel, 2014), with a wider range of partners, collaborators, and stakeholders than ever before. To address contemporary issues, public health leaders must be able to "cultivate interdependence and oneness of mission, mobilizing individual commitment by inviting people in to build coalitions and share power" (Koh, 2009, p. S14). Public health leaders must use "new methods of integrating and displaying data, telling evidence-based stories, and engaging communities in the design and planning of research and programs" (Pittman, 2014, p. 19). Well educated and appropriately trained public health leaders are required to lead people *and* public health organizations (Holsinger et al., 2015).

Baum (2007) described a "nutcracker effect" to address health inequities that reflects the pressure of political commitment at the top and policy action from the bottom supported by communities and civil society. To have an impact on health inequities, the nutcracker effect requires a combination of political leadership and leadership at the local and community level. The aim is to "improve everybody's health towards the high level of those at the top" with "extra effort on improving health for the poor" (Marmot, 2015, p. 29). Baum et al. (2009) described a delicate balance of leadership and stewardship: leadership to improve the equity performance of the health system and stewardship to work with other sectors to improve health and health equity. This bold vision requires strong, determined, coordinated, and sustained leadership at local, national, and international levels including that of the public health sector (Koh, 2009).

Koh and Nowinski (2010) identified social strategy, political will, and interpersonal skill along with science as key factors for effective leadership to achieve health equity. Effective public health leaders for health equity are described as having: (1) the knowledge, skills, and

attitudes required to advocate for health equity; (2) access to organizational capacities and resources including budget, staff, and high-quality population health data; and (3) the ability to link organizational activities with community and partner actions (NCCDH, 2013b). Koh and Jacobson (2009) stated that “the artful public health leader will be one who can function in an ambiguous arena without clear boundaries or hierarchies, using a chaotic context as a starting point for change” (p. 200).

Day et al. (2012) explored the role of leadership in addressing public health challenges of the 21st century. They interviewed 10 nominated “public health superheroes” about “how they achieved their vision, handled conflict, influenced large-scale change, and regarded the future of public health leadership and training” (p. 1205). In this study, public health leaders were described as having a strong sense of the value and contributions of public health. They were able to articulate the shared values of public health and participate in building the profession for the future, and they were noted for their exceptional ability to network and connect. They had an ability to put “the pieces of the jigsaw together” (p.1206).

Similarly, Gatherer et al. (2010) asked the question “Is the ability to look for opportunities and maximise the gains from them and an awareness of what society feels or should feel is no longer acceptable, part of effective public health leadership?” (p. 617). They argued that, to be an effective public health leader, one must have a clear idea of what needs to be done *and* “of the best options for achieving the desired results” (p. 617). While the first part, creating a vision for what needs to be done, is important, the latter is challenging and requires public health leadership to redefine what is acceptable today and to bring a human rights and social justice lens to contemporary health issues. Acting intentionally requires clarity about current health issues and those that lie ahead.

2.7 Summary

Although there is an almost overwhelming amount of literature on leadership, leadership theory, and leadership development, it has been noted that the uptake of leadership theories and models in public health has been slow (Carlton et al., 2015a). Carr et al. (2009) examined what type of leadership was required for public health and found that, while there is transferability of theory, tools and techniques from general leadership literature, the leadership challenge in public health is unique. Contributing to the uniqueness is the breadth and complexity of current public health issues and their solutions, overlaid with the number and diversity of partners and stakeholders who are or could be engaged in the pursuit of improved health (Carr et al., 2009; Koh, 2009; Taylor, 2012). For example, a key feature of public health leadership is a focus on exercising external influence through a wide range of partnerships and networks. However, until very recently, leadership across networks of organisations and sectors received very little attention in the leadership literature (Srinivasan & Holsinger, 2012; Taylor, 2012). Although numerous leadership theories have been discussed in the literature as being useful to public health, there is a dearth of literature examining the development, translation, and application of leadership theories and models to public health (Begun & Malcolm, 2014; Carlton et al., 2015a; Rowitz, 2014). It is revealing that several emerging theories identified as relevant to public health practice did not appear in the leadership literature e.g. intersectionality, critical social theory, emancipatory approaches, and general systems theory.

Similarly, while public health leadership has been described and competencies of public health leaders identified, as well as their essential role in advancing health equity, there is little research evidence on effective public health leaders or on developing and strengthening public health leadership (Catford, 1997; Hannaway, Plsek, & Hunter, 2009)—in particular, to lead

action for health equity. Most of the literature found was opinion in nature and secondary literature, reinforcing the conclusion that the evidence base is emerging.

In conclusion, while there is abundant theoretical literature examining leadership, and within that some literature examining public health leadership specifically, there is little research literature, which is in its infancy and difficult to find. A body of research evidence to inform public health leadership to advance health equity was not found. A scoping review of the literature is a useful systematic review method to identify what types and sources of evidence are available as well as the gaps in the research (Daudt, van Mossel, & Scott, 2013).Thus, given the lack of research literature directly examining public health leadership to advance healthy equity, a scoping review was undertaken to answer the research question: *What aspects of public health leadership to advance health equity have been considered by research?* The following chapter will detail the research method, scoping review, including rationale for its selection. It will also discuss how the literature review detailed in this chapter informed the analytical framework used in the scoping review to gather, analyze, and synthesize the data found.

CHAPTER 3 – Method and Research Approach

This chapter outlines the rationale for selecting a scoping review to answer the research question as well as the scoping review framework that was adopted as the research method. The six phases of the scoping review framework and corresponding activities are described, followed by a seventh phase that was added for qualitative synthesis and deeper interpretation of the scoping review results through a metasummary.

3.1 Background

In 2012, the NCCDH received feedback from the public health community that there was a lack of evidence in the published literature to guide effective public health leadership to advance health equity. At that time, while there was literature describing the attributes of effective leaders in other sectors (Cummings, et al., 2010; Denis, Langley, & Rouleau, 2010; Kouzes & Posner, 2010), literature that examined public health leadership and its effectiveness did not appear to be available. A preliminary search of the literature was undertaken and confirmed that, in fact, a current systematic review of public health leadership attributes to advance public health equity did not exist.

Therefore, this study was undertaken to examine the "extent, range, and nature" (Arksey & O'Malley, 2005, p. 21) of research evidence for public health leadership to advance health equity; to summarize and disseminate existing research findings; and to identify gaps in the evidence base that can be addressed through further research.

3.2 Rationale to Support a Scoping Review

A traditional systematic review was considered in 2012 by the NCCDH to answer the following research questions: (1) What is the impact of public health leadership on action to address the social determinants of health and advance health equity? and (2) What are effective

interventions to enhance public health leadership specifically for action on the social determinants of health and health equity?

Systematic reviews of the literature are considered a pillar of evidence-informed policy and practice. As a method, systematic reviews are used to make "sense of large bodies of information, and a means of contributing to the answers to questions about what works and what does not" (Petticrew & Roberts, 2006, p. 2). Systematic reviews attempt "to collate all empirical evidence that fits pre-specified eligibility criteria in order to answer a specific research question" ("What is a systematic review?," 2011, para. 1). They are useful to map out areas of uncertainty and to identify where little or no relevant research has been done (Petticrew & Roberts, 2006).

Systematic reviews are widely used and adhere to a set of scientific methods that aim to limit systematic bias. Key characteristics of systematic reviews include:

> a clearly stated set of objectives with pre-defined eligibility criteria for studies; an explicit, reproducible methodology; a systematic search that attempts to identify all studies that would meet the eligibility criteria; an assessment of the validity of the findings of the included studies, for example through the assessment of risk of bias; and a systematic presentation, and synthesis, of the characteristics and findings of the included studies. ("What is a systematic review?," 2011, para. 1)

The body of studies located in the initial steps of the NCCDH systematic review did not lend themselves to a full traditional systematic review due to the imperative to include randomized controlled trials, which were extremely limited. In a commentary, Lang, Edwards, and Fleiszer (2007) described an "empty review" as one where there are no or not enough eligible studies available to be reviewed for a particular topic. Empty reviews, like this one, are an important finding as they "highlight major research gaps, and … indicate the state of research

evidence at a particular point in time" (p. 596). Once it was clear that a traditional systematic review was not going to yield the required answers to the research question and objectives, the researcher began to explore alternative and more appropriate review methods. At this point the researcher undertook the project as a dissertation.

Grant and Booth (2009) analyzed 14 review types and concluded that the lack of appropriate evidence base for systematic reviews "has necessitated the identification of a greater range of review types, opening up the prospect of summarizing case studies, qualitative research and even theoretical and conceptual published and unpublished outputs" (p. 92). Additionally, they suggested that qualitative systematic reviews had considerable strength to complement other more traditional evidence synthesis. These methods could be used to explore barriers and facilitators to service delivery; investigate perceptions of new and emerging roles; and inform decisions where evidence on effectiveness is not available and opinions, preferences, and attitudes become determining factors. Grant and Booth cautioned that the methods for qualitative systematic review are in their infancy and mired in debate about when specific methods or approaches are appropriate. This debate centres on "whether the dominant model for qualitative evidence synthesis is the classic systematic review method or whether it is more appropriate to adapt and adopt concepts from primary qualitative research (e.g., grounded theory, theoretical saturation, purposive sampling)" (Grant & Booth, 2009, p. 100).

A scoping review is useful to identify key concepts and gaps in the research as well as the types and sources of evidence available to inform practice, policy making, and research on a particular topic or research area (Daudt, van Mossel, & Scott, 2013). This type of review is characterized by "an iterative, conceptual and interpretative approach that emphasizes the importance of developing a critique based on the relevance, credibility and contribution of

evidence rather than by rigidly determined methodological considerations of analysis and synthesis" (Davis, Drey, & Gould, 2009, p. 1388). Scoping studies are systematic and rigorous in nature and use steps similar to traditional systemic reviews. Armstrong, Hall, Doyle, and Waters (2011) stated that a scoping review of the literature is considered a research outcome in its own right and is a "useful and increasingly popular way to collect and organize important background information and develop a picture of the existing evidence base" (p. 147).

Davis et al. (2009) suggested a scoping review is useful when looking at literature related to policy or where there is a need for clear guidance regarding more focused lines of research and development. However, they cautioned that, while a scoping review method is widely used, it remains technically poorly defined. In the recent literature, several authors have provided further direction to standardize and clarify the methodology for a scoping review and to guide other researchers in undertaking and reporting on this methodology (Daudt et al., 2013; Peters, Godfrey, McInerney, et al., 2015; Pham et al., 2014).

Scoping reviews vary considerably in terms of aims, the process by which the review is conducted, and methodological rigour (Coughlan, Cronin, & Ryan, 2013). A scoping review can be part of a preliminary investigation or a stand-alone project. They are not appropriate for answering clinical questions (Coughlan et al., 2013). Scoping reviews are often used to determine the feasibility of undertaking a full systematic review, in other words, to determine if there is sufficient literature to undertake a systematic review (Coughlan et al., 2013). In addition to identifying gaps in the current research literature, scoping reviews can be used to advise on and justify further research; summarize and disseminate research findings to policy makers, practitioners, and the public; develop logical ideas and theoretical approaches best suited to

future research; and clarify conceptual understanding of the topic where definitions are unclear and where there is lack of agreement (Coughlan et al., 2013).

Given the increasing popularity of scoping reviews for synthesizing research evidence, Pham et al. (2014) conducted a scoping review to identify scoping review studies. In other words, a scoping review of scoping reviews. Their findings indicated that scoping reviews are gaining momentum as a distinct research activity, although they remain varied in purpose, methodological rigour, reporting, and use of terminology. These authors recommended referring to this research method as a scoping review (instead of scoping study or scoping exercise) to more explicitly indicate that it is a type of literature review. Further, they concluded that, while scoping reviews are one method among many to review literature, they are distinct and have a unique set of purposes and objectives, offering the potential to answer a different set of research questions (Pham et al., 2014).

Scoping reviews "share several characteristics of the systematic review in attempting to be systematic, transparent and replicable" (Grant & Booth, 2009, p. 101). Scoping reviews can be used to summarize and disseminate findings from different types of research studies. Using rigorous, comprehensive, and transparent methods, scoping reviews seek all literature relevant to the topic being studied (Valaitis et al., 2012). Table 3-1 provides a comparative summary of the key differences between systematic reviews and scoping reviews.

Table 3-1. Comparison of Systemic Reviews and Scoping Reviews of the Literature

Systematic review	Scoping review
Focused research question(s) with narrow parameters	Broad research question(s)
Inclusion/exclusion defined at outset	Inclusion/exclusion developed iteratively
Quality appraisal to determine inclusion	Quality appraisal not usually done
Detailed data extraction	Iterative data extraction
Quantitative synthesis often performed	Synthesis more qualitative
Quality of the studies appraised to generate a conclusion related to the focused research question	Used to identify parameters and gaps in a body of literature

Note. Adapted from "'Scoping the scope' of a cochrane review," by R. Armstrong, B. J. Hall, J. Doyle, and E. Waters, 2011, *Journal of Public Health, 33*, p. 148.

Given that the objective of the current study is to review and synthesize evidence to support action in public health, a scoping review was deemed to be an appropriate review method (Lemire, Souffez, & Laurendeau, 2013). In a similar study, scoping review method with narrative synthesis was used by Reichenpfader, Carlfjord, and Nilsen (2015) to review research examining the relationship between leadership and implementation science, or evidence-based decision making. The decision to proceed with a scoping review was further informed by Tirilis, Husson, DeCorby, and Dobbins (2011) who identified an evidence gap related to social determinants of health interventions and found a limited amount of review evidence evaluating effectiveness of interventions on the determinants. As stated earlier, at this point. the project became the focus of this dissertation.

3.3 Scoping Review Framework

As the scoping review research got underway in 2012, it was noteworthy that the research method was still being developed, described in the literature, and increasingly utilized. Arksey and O'Malley (2005) described a scoping study as a technique to map relevant literature in a field of interest and proposed a six-phase framework (see Table 3-2 for a description of the six phases). Emphasizing the value of this emerging research method, and further developing it, Davis et al. (2009) stated that:

> Scoping gives meaning to the "what" and "why" explanations of an inquiry as opposed to the "who", "where" and "how" and provides a comprehensive and panoramic overview that not only illuminates its extent and context but also has the potential to influence policy or practice development. (p. 1338)

They elaborated that a scoping review enhances conceptual clarity about a specific area of inquiry or evidence base through the synthesis and analysis of a diverse body of research and non-research material. Davis et al. built on Arksey and O'Malley's (2005) work and suggested that a scoping review is useful to provide an overview of the breadth rather than the depth of evidence in a particular field. This emerging research method is especially useful in a field where the evidence base is underdeveloped or emerging, as is the case with public health leadership, social determinants of health, and health equity.

Table 3-2. Summary of Scoping Review Phases

Phase	Description
1. Identify research questions	• Develop research question(s) to facilitate appropriate search of the literature
2. Identify relevant studies	• Develop search methods to answer research questions • Include date, language constraints, and the range of sources to be searched • Consider available time, resources, and budget
3. Select studies	• Use rigorous systematic review methods for screening • Establish inclusion and exclusion criteria iteratively as familiarity with the literature set grows • Will require piloting and several levels and rounds of screening by a research team
4. Chart the data	• Extract data using similar processes as for a systematic review but using a broader approach • Use narrative descriptive – analytical framework method • Do not appraise and weigh the methodological quality of the studies
5. Collate, summarize, and report findings	• Use research questions as a guide • Use a framework approach
6. Consultation process	• With key stakeholders or experts – can be at the end or throughout the process • Purpose is to validate findings, seek additional references, and provide perspective and valuable insights

Note. Adapted from "Scoping studies: Towards a methodological framework," by H. Arksey and L. O'Malley, 2005, *International Journal of Social Research Methodology, 8*, pp. 23-29.

3.4 Research Design

As a specific type of literature review, a scoping review provides a map or snapshot of the existing literature, and it delayers the results so to be useful to policy makers, researchers,

and practitioners (Peters, Godfrey, McInerney, et al., 2015). The research followed the six scoping review phases described by Arksey and O'Malley (2005) and further developed by Levac et al. (2010). These phases are described in the next section.

3.5 Method

The early phases of this review were guided by the protocol developed for a traditional systematic review to be conducted by the NCCDH. A protocol sets out the review team's intentions in terms of the topic and the methods to be used in carrying out a proposed review. The a priori preparation of a protocol is an important tool to reduce bias by clearly identifying the question and setting out the inclusion and exclusion criteria before the studies are selected (Campbell Collaboration, 2001). The protocol should also include how the analysis will be conducted and the outcomes that will be reported. While the protocol for a traditional systematic review will evolve somewhat during the course of the project, the iterative nature of a scoping review made following the pre-set protocol neither possible nor advisable. However, the protocol was useful and necessary to initially provide guidance for searching and screening the extant literature set.

Research projects, such as the one undertaken, are large and complex, and, at times, the path is not clear on how to proceed. They are traditionally conducted by large teams made up of researchers, knowledge users, and methods experts. Over the life of this project, while such individuals and groups provided assistance and/or guidance, the researcher conducted the study alone. The fact that the research method was evolving added to the complexity. Therefore, specific expertise in systematic reviews and scoping reviews of the literature was sought to ensure rigour in application of the method. This expertise included librarians familiar with the

method and tools used, as well as advice from consultants and researchers with previous experience using the research method.

Over the life of the review, the researcher incorporated knowledge from experts through consultation on inclusion and exclusion criteria, use of electronic tools for citation review and data extraction, review of preliminary findings, review of initial drafts of the research report, and participation in the validation exercise (Phase 6). This iterative process enhanced both the rigour and relevance of the review and is consistent with the research method (Arksey & O'Malley, 2005; Levac et al., 2010).

3.5.1 Research problem (Phase 1)

Given the lack of obvious research or empirical evidence to guide public health leadership to address the social determinants of health and advance health equity, Phase 1 of this study outlined the intent to undertake a scoping review of relevant published research literature on this topic in order to identify strengths and gaps in the literature and research evidence base. The focus of this scoping review is to examine the research literature that examined health equity interventions and reported outcomes. Leadership was a factor in the research studies; however, it was not necessarily the focus of the research. The research question that guided the scoping review was: *What aspects of public health leadership to advance health equity have been considered by research?* The objectives for the scoping review were:

1. Identify the "extent, range, and nature" (Arksey & O'Malley, 2005, p. 21) of research studies examining public health leadership to advance health equity, and thereby identify strengths and gaps;
2. Identify, compare, and contrast the research questions, methods, and theoretical frameworks used;

3. Gain an understanding of the aspects and description of public health leadership at the individual, organizational, and system level; and
4. Identify tools, strategies, and mechanisms used to support public health leadership to advance health equity.

3.5.2 Search strategy (Phase 2)

In Phase 2, search methods used in traditional systematic reviews were employed to conduct a comprehensive search and retrieval of the published literature on public health leadership from the year 2000 onwards. The search strategy for this scoping review was comprehensive in order to identify primary studies as well as reviews in the peer-reviewed and grey literature. Foundational to this strategy was delineating an answerable question in planning the review of the literature. A clearly framed question guides the researcher as to how to collect the studies, determine eligibility for inclusion, and conduct the analysis (Cochrane Public Health, n.d.). While the research question evolved throughout the research project, the initial questions were developed a priori to the search and screening process to reduce their susceptibility to bias.

The research question was developed using PICO: Population, Intervention, Comparison, and Outcome (National Collaborating Centre for Methods and Tools, 2012). Each of these elements will be discussed as they relate to this research study. First, the population under consideration was broad and not limited. The population of an included study could relate to society as a whole or to a specific population, such as children in a particular geographic location. As Peters, Godfrey, McInerney, et al. (2015) described, the context of a scoping review "should be clearly defined and may include, but is not limited to, consideration of cultural factors such as geographic location and/or specific racial or gender-based interests" or "a particular country or health system or healthcare setting" (p. 13). Second, the type of intervention was also

not limited in the search. However, to be included in the final analysis, the studies had to report on a public health intervention and an intervention group. Examples of interventions include a program or service change, action on the determinants of health, policy and policy advocacy, partnership, intersectoral collaboration, and community engagement. Third, no comparison was used given the research question aimed to describe the nature and extent of the research activity in this area. The final consideration was outcome. To be included, the study had to report an outcome. The type or nature of the outcome was not limited. As the intent of the review was to examine public health leadership to address the social determinants of health and advance health equity, it was important to include studies that reported outcomes. Examples of outcomes included community coalitions, policy and programs implemented, and production of a community video. Outcomes "should be linked closely to the objective and purpose for undertaking the scoping review" (Peters, Godfrey, McInerney, et al., 2015, p. 13). In addition, the search was not limited regarding type of research study and included a broad range of methods and research designs, including program evaluations and participatory action research. The result of this process was a clear focus for the review on research literature that examined health equity interventions, reported outcomes and where public health leadership was a factor.

A search strategy ideally is undertaken by a multidisciplinary team rather than an individual (Coughlan et al., 2013). In this study, the researcher engaged others to assist at different stages of the research. The PICO, as described above, was used by the researcher as a guide to develop the search strategy in collaboration with a librarian experienced in conducting searches for systematic reviews. The researcher worked with the same librarian to conduct the initial search of the databases and the three subsequent updates to ensure consistency in process. General and synonymous terms were identified to capture any relevant literature on the specific

and individual topics in the PICO. A detailed description of the search strategy used for the online databases can be found in Appendix A. Reference lists of the included studies were hand searched by the researcher for additional studies that met the inclusion criteria. Only four additional citations were identified, and none of those met the final inclusion criteria. The researcher did not contact authors of primary studies or reviews for further information. Using rigorous and transparent methods throughout the entire process of a scoping review is essential.

In a scoping review, the search strategy should be as extensive as possible with the intent to identify all relevant literature. In aligning with this imperative, this study's search was undertaken in the following nine electronic databases: Medline, EMBASE, PsycINFO, Cochrane Central, CINAHL, Social Science Abstracts, Applied Social Science Index and Abstracts, Campbell Collaboration, and Business Source Complete. It was limited to the year 2000 forward and to two languages (English and French). It was developed in Medline (see Appendix A) and translated into terms appropriate for each database. The search combined both subject heading and text words for the concepts of *public health* and *leadership*. The initial search was conducted in 2012 and updated three times, most recently in July 2016.

A search for and retrieval of potentially relevant grey literature was conducted using rigorous, accepted methods. The researcher and librarian used the PICO to guide the search strategy for the grey literature and employed the same search terms and the same limitations for date and language as used in the other databases. Databases (e.g., Grey Matters, DARE) were searched as well as websites of organizations that were prioritized because they had a strong research infrastructure that may house the findings of intervention studies, program evaluations, and participatory action research (e.g., former Public Health Research, Education and

Development program in Ontario; public health units; Population Health Improvement Research Network; National Collaborating Centres for Public Health).

In summary, the initial search in 2012 located 5,546 potentially relevant articles, including primary studies and literature reviews. The search of peer-reviewed and grey literature was updated in October 2013, July 2014, and again in July 2016. After duplicate removal, a total of 7,861 potentially relevant articles (title and abstract only) were uploaded into the systematic review program DistillerSR™ (Evidence Partners, n.d.).

3.5.3 Search outcome and study selection (Phase 3)

Phase 3 was the most time consuming phase of the review. Identifying a series of inclusion and exclusion criteria (such as filtering by year, population, geographic region, or intervention type) can help to narrow the search and remove irrelevant papers (Peters, Godfrey, McInerney, et al., 2015). The eligibility criteria for inclusion are driven by the research question, inform the development of the search strategies, and form the basis for assessing search results for potentially relevant studies for inclusion (Grimshaw, 2010). Poorly developed inclusion/exclusion criteria "could lead to the development of search strategies that are insensitive (fail to identify some or all relevant studies) and/or nonspecific (increase the workload associated with screening searches)" (Grimshaw, 2010, p. 13).

At this level of screening, (i.e. title and abstract), the following eligibility criteria for each article were applied: (1) written in French or English; (2) not a commentary, letter to the editor, or a conference proceeding; and (3) about leadership in public health, social determinants of health, and/or health equity (health inequality or disparity). Each of the 7,861 articles was independently screened at the title and abstract level by the researcher and several other reviewers. The researcher screened approximately 75% of the citations at this level. The other

reviewers involved in the screening were selected from the researcher's knowledge translation colleagues at the NCCDH, as well as research assistants working with the National Collaborating Centre for Methods and Tools. The reviewers were all experienced in systematic review methodology and had a background in public health, social determinants of health, and health equity. The researcher met with each of the potential reviewers to ascertain their appropriateness, interest, and availability to be involved. In the three updates to the scoping review, the researcher engaged consistent reviewers.

Screening at this level was not straightforward as the concepts guiding the scoping review were not consistently defined or used in the literature. The core concept of this literature review, public health leadership, and its two subconcepts, public health and leadership, are used and defined with great variability in the literature. It is important that the core concepts examined by a scoping review are "clearly articulated to guide the scope and breadth of the inquiry" (Peters, Godfrey, McInerney, et al., 2015, p. 13). The lack of precision in the core concept and subconcepts, coupled with the lack of research that clearly studied the core concept, led to multiple revisits and reconstitution of the eligibility criteria. In the end, a study was included if the core concept of public health leadership or its constituents of public health and leadership were present in some element of the study (i.e., title, abstract, text). The secondary concepts of addressing the social determinants of health and advancing health equity are also inconsistently used or defined in the literature, adding to the complexity of the scoping review.

Working definitions of the key concepts (i.e., public health, leadership, social determinants of health, health equity, inequality, and disparity) were drafted by the researcher and validated with the other reviewers for use in this scoping review (see Appendix B for the list of definitions). The definitions were used by the researcher and the reviewers as they

independently screened each citation. Consistent interpretation and application of these working definitions was a challenge. The body of work being reviewed was diverse, and several group discussions were required to achieve consensus on consistent application of the eligibility criteria by the researcher and the other reviewers. At this level, disagreements were not resolved. Studies were included if one reviewer screened it in. As a result, fewer than half of the citations (3,759 articles) were excluded at this level.

The titles and abstracts of the remaining 4,102 citations were screened a second time. Again, each citation was independently screened by two reviewers. The researcher reviewed close to 50% of the citations (1,827) in the second screen at this level. Studies advanced to the next level of screening if one reviewer screened them in, and disagreements were not resolved. At this level, studies were included if at least one or both reviewers answered yes to each of the following questions: (1) Does the study have leadership (formal and informal) in public health as a focus?; (2) Does the article report the results of a study (i.e., is not a descriptive summary of the literature or a pre-intervention theoretical paper)?; and (3) Does the study describe leadership in public health on action to address the social determinants of health or to advance health equity (address inequalities and disparities)? Once this level of screening was completed, another 3,207 articles were excluded.

The next step was full-text screening of the included articles. To facilitate this level of screening, a full-text copy of the 895 articles that met the inclusion criteria was either retrieved electronically or, if not available electronically, secured as hard-copy (and scanned) version. The full text of the included articles was uploaded into DistillerSR™. At this stage, the researcher reviewed the eligibility criteria again with the reviewers using the scoping review purpose, research question, and objectives as a guide. The eligibility criteria were further clarified by the

researcher for the reviewers to use in the next stage of full-text screening (Peters, Godfrey, McInerney, et al., 2015). Table 3-3 provides a summary of final inclusion and exclusion criteria that evolved and was used through the course of the scoping review.

Table 3-3. Inclusion and Exclusion Criteria

Criterion	Inclusion	Exclusion
Time period	• January 2000 to July 2016	• Any study outside these dates
Language	• English or French	• Not English or French
Type of article	• Reported original research including published program evaluation	• Any article that was not reporting original research (e.g., theoretical papers, pre-research descriptions, commentaries) • Reviews of the literature • Theses and dissertations
Study focus	• Leadership was the focus of the study, outcome of the study, or a finding of the study • Public health was involved (e.g., as a provider of a program or service, partner, funder, policy maker, or investigator) • Social determinants of health were considered • Health equity (or health inequalities or disparities) was considered	• No reference to leadership, public health, health equity (or health inequalities or disparities), or social determinants of health
Service or intervention	• Identified an intervention and an intervention group	• No intervention or intervention group identified
Study results	• Reported outcomes	• Did not report outcomes

At the level of full-text screening, the researcher and reviewers used the following three questions as an eligibility guide to base their decisions about which studies to include or exclude: (1) Now that you have access to the full-text article, do you think this citation is relevant? (i.e., not a commentary, news article, conference proceeding, single author with no abstract, pre-intervention paper, etc.); (2) Does the study have leadership (formal or informal) in public health (includes formal public health service sector and organizations doing public health research) as a focus? (i.e., speaks to leadership roles/actions of individuals or organizations in the public health sector as the objective of the study, or in relation to the action being studied; the study could also have public health as co-leaders); and (3) Does the study describe the impact of public health leadership, directly or indirectly, on actions or health outcomes related to addressing the social determinants of health (e.g., income, housing, poverty, education, gender equity, food security, access to health services) and/or to advancing health equity (for the whole population or specific sub-population)?

Each of the articles was screened by two reviewers using the aforementioned screening questions. The researcher screened 58% of the articles (519). Articles were excluded if one of the three aspects was not addressed in the abstract, results, or discussion sections of the respective study. At this level of screening, disagreements were flagged. The researcher met with the other reviewers several times to discuss eligibility criteria and resolve disagreements in terms of inclusion and exclusion. The researcher participated in the screening of each citation where there was a disagreement to ensure consistency of application of the eligibility criteria. Included studies had to demonstrate public health involvement, which resulted in consensus-building discussions with the reviewers at several junctures of the scoping review. The researcher and reviewers returned to the description and definitions of public health and used specific studies as

examples to ensure a consistent application of the eligibility criteria. The first round of full-text screening resulted in inclusion of 239 articles (58%).

The 239 included articles were screened by the researcher and a reviewer twice more using the above eligibility criteria. The researcher reviewed all of the articles at this level and subsequent screening levels. Between each round of screening, the researcher met with the other reviewers and affirmed the inclusion and inclusion criteria within the intent of the scoping review, research questions, and emerging understanding of the literature set. In this time period, the second update of the literature search occurred with several additional key citations undergoing review and meeting the eligibility criteria for inclusion. For the third and more recent (July 2016) update, the researcher engaged the same reviewers in the review process to ensure consistency and provided a refresher for the reviewers on the review process and the eligibility criteria. The researcher and reviewers met several times during the third update to clarify the application of the eligibility criteria and to resolve conflicts.

The final set of literature, before data extraction, included 41 research studies. Reasons for exclusion were recorded in the DistillerSR™ database (see Appendix C for examples). Transparency of decision making in the review process is imperative for future replication or updating of the review (Peters, Godfrey, Khalil, et al., 2015). The researcher maintained a journal of processes and decisions (see Appendix D) and produced several summary documents throughout this process. Table 3-4 summarizes the results of the five rounds of screening.

The researcher conducted all data extraction using the data extraction form developed in collaboration with the other reviewers, systematic review experts, and the researcher's supervisor. The data extraction was conducted using DistillerSR™. During the data extraction process a closer examination of the included studies occurred against the exclusion criteria.

Another 14 studies were excluded as they did not specifically report on the social determinants of health or health equity (two studies), were reviews of the literature (three studies), described perceptions of leadership without identifying impact or outcomes (five studies), or had results that were the development of a model or toolkit (two studies). The researcher discussed the decision to exclude at this stage with the other reviewers and committee supervisor to reach consensus. As a result, full data were extracted from the remaining 27 studies. A Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flow diagram (Moher, 2009) detailing the screening and review process can be found in Appendix E.

Table 3-4. Summary of Screening Process and Results

Screening level	Number of citations included
Initial search (and updates)	7,861
Title and abstract 1st screen (2 reviewers)	4,102 (3,759 excluded)
Title and abstract 2nd screen (2 reviewers)	895 (3,207 excluded)
Full text 1st screen (2 reviewers)	239 (656 excluded)
Full text 2nd screen (2 reviewers)	103 (136 excluded)
Full text 3rd screen (1 reviewer)	41 (62 excluded)

A flow chart is an effective way to clearly detail the review decision process, and it should include results from the search, removal of duplicate citations, study selection, full-text retrieval, and any additions from reference list searching (Peters, Godfrey, Khalil, et al., 2015). Figure 3-1 provides a flow chart summary of the screening process for this study.

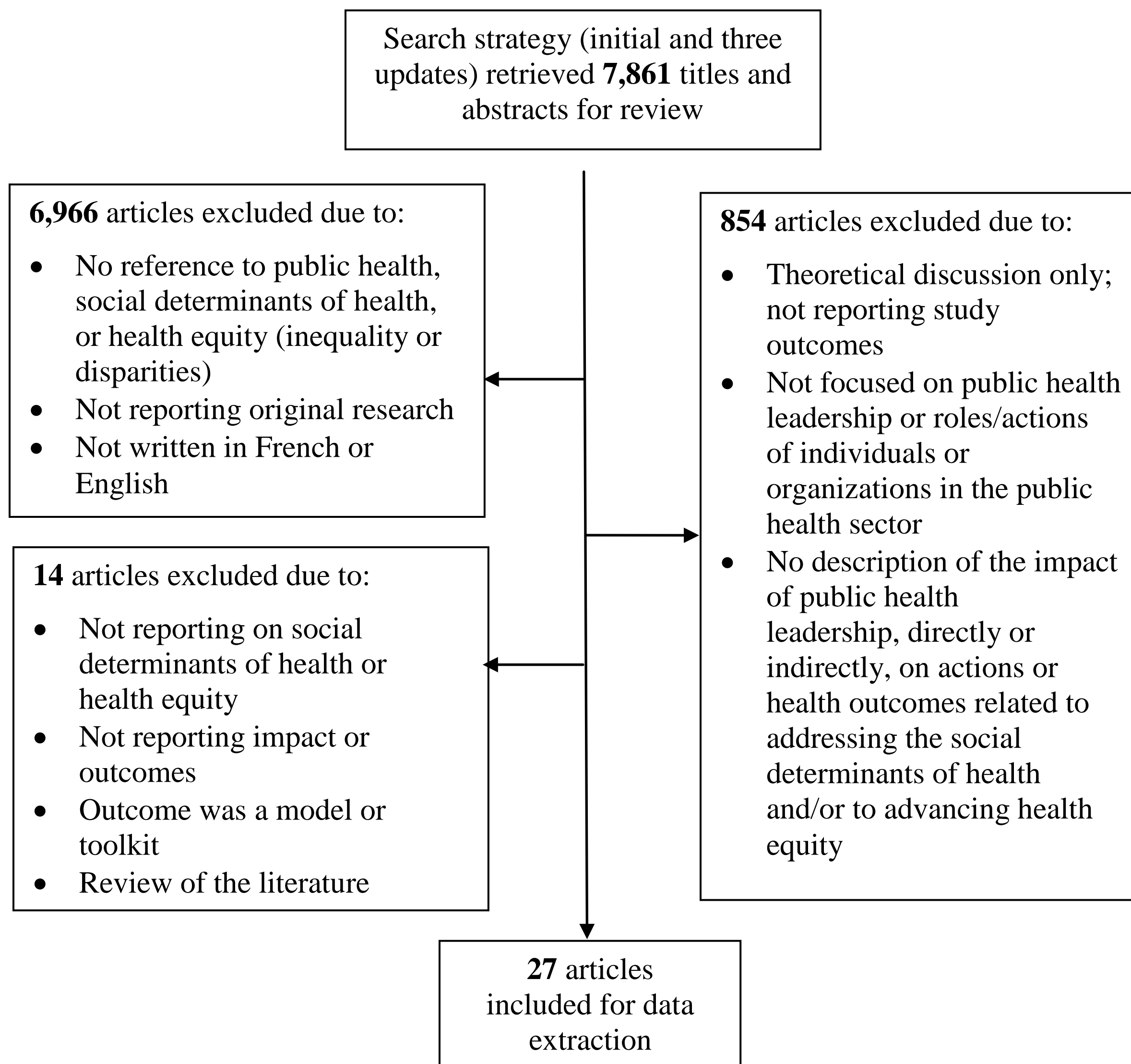


Figure 3-1. **Flow chart of screening process for inclusion and exclusion**

3.5.4 Charting the data (Phase 4)

To facilitate conducting Phase 4, inclusion and exclusion of studies in this scoping review were determined based on relevance rather than the quality of studies (Valaitis et al., 2012). In their scoping review of scoping reviews, Pham et al. (2014) found that a quality assessment of included studies was infrequently performed in the included reviews. However, it was reported

as a study limitation for a number of the reviews. They noted that some authors (e.g., Daudt et al., 2013) argued that quality assessment is a necessary component of a scoping review and should be performed using validated tools. Given the intent of a scoping review is to provide an overview of existing research, Pham et al. concluded that all relevant literature, regardless of quality, should be included. But they added that some form of quality assessment of the included studies would assist in describing the gaps in the evidence base, not just where research was missing. However, Levac et al. (2010) stated that it "remains unclear whether the lack of quality assessment impacts the uptake and relevance of scoping study findings" (p. 8). They also pointed out that there are challenges in assessing quality, especially in relation to the wide range of study designs and often large volume of literature included in a scoping review.

Given the diverse literature set, and the lack of consensus in the literature regarding how to assess quality, in this scoping review, a quality appraisal was not conducted. However, data regarding the research question, method, and design for each study were extracted and charted, and are summarized in the findings chapter. Analysis of the nature and type of research methods used is included in the findings, as are the theoretical frameworks used to guide the studies. The result was a set of research studies that identified health equity in either the purpose of the study, research question, or research design, and where an intervention was described and outcomes reported.

Charting is a technique for sifting and sorting the data according to issues and themes. Applying a common analytic framework such as charting to all of the primary research studies results in standard information being collected and increases the rigour applied and the usefulness of the resulting analysis in terms of decision making (Arksey & O'Malley, 2005). Given the large amount of information contained in the included studies, a framework approach

assisted the researcher to be systematic in the data extraction. As recommended by Arksey and O'Malley (2005), the researcher charted a mixture of general information about the study and specific information relating to "the study population, the type of intervention, outcome measures employed and the study design" (p. 26-27).

In advancing the scoping review framework proposed by Arksey and O'Malley, Levac et al. (2010) made the following suggestions for this phase: extract information in order to answer the research question, and develop, test, and continually update the data-charting form. Using these suggestions as a guide, the following three questions derived from the research questions were developed to guide data extraction and collation: (1) What research questions, design, and theoretical frameworks were used to understand public health leadership to advance health equity?; (2) What aspects of leadership were present in this literature set?; and (3) What tools, strategies, or mechanisms were used to support or develop public health leadership to advance health equity? With these questions as a framework, a data extraction form was developed in DistillerSR™. The researcher pilot tested the form as did two other reviewers on five included articles. The researcher then met with the two reviewers to revise the data extraction form based on their experience with it and to determine whether the form supported a data extraction approach that is consistent with the research questions and purpose (Levac et al., 2010). The form was then used by the researcher to extract contextual or process-oriented information from each of the 27 included studies. The findings chapter illustrates the results of the extensive data extraction and charting process.

3.5.5 Collating, summarizing, and reporting the results (Phase 5)

As extensive and time consuming as Phases 2, 3, and 4 were in this study, Phase 5 was the most immersive aspect of the scoping review process. The Arksey and O'Malley (2005)

framework provides little detail in terms of steps and processes to ensure the research could proceed in a rigorous way that could be replicated. Levac et al. (2010) recommended three steps in this phase to increase the consistency of scoping study methodology: analyze the data, report results, and apply meaning to the results. Following these steps, the analysis for this review involved a descriptive numerical summary and a thematic analysis (Levac et al., 2010). A range of characteristics of the included studies was described, including the overall number of studies, years of publication, location of the study, types of study design, types of interventions, characteristics of the study populations, and outcomes.

As Levac et al. (2010) suggested, conducting a thematic analysis requires the extraction of more detailed data. Therefore, the researcher modified the data extraction form at this stage to include short direct excerpts from the studies and to add an "other" category to many of the data extraction form sections. Thematic analysis of the aspects of public health leadership, as well as the tools, strategies, and mechanisms to advance health equity, was then completed.

A narrative account of the data analysis is found in the findings chapter. Numerical analysis of the extent, nature, and distribution of the 27 included studies is presented, in the form of narrative description, tables, charts, and word clouds. The thematic analysis is reported using narrative and numerical description, tables, and direct quotes.

The implications of the findings of this scoping review were considered within the broader context of public health leadership and action to address the determinants of health and advance health equity. Implications were developed for practice (at an individual, organizational, and system level); policy (for local communities, governmental, and system-wide); and for future research and contribution to the evidence base. To add depth to these implications, the final phase (i.e., Phase 6) of the scoping review invited a number of senior public health leaders from

across Canada to provide feedback on their level of agreement with the findings from their practice and experience.

3.5.6 Validation with key stakeholders (Phase 6)

For Phase 6 of the scoping review process, a purposive sample of senior public health leaders from across Canada participated in an online survey to consider the findings that emerged in answer to two of the research questions: (1) What aspects of leadership were present in this literature set? and (2) What tools, strategies, or mechanisms were used to support or develop public health leadership to advance health equity? The survey provided an opportunity for these public health leaders to reflect on their practice and experience, validate or refute findings, identify gaps they perceived in the findings, and provide comments and/or examples.

Ethical approval was sought from the University of Saskatchewan Research Ethics Board (see Appendix F for the application and Appendix G for participant information and consent). The Research Ethics Board determined that the validation survey met the requirements for exemption status as per the *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans* (2014), Article 2.1 (see Appendix H for the exemption letter).

The online survey was pilot tested with four respondents and took approximately 30 minutes to complete. The survey was modified based on feedback received. An email invitation (Appendix I) was sent to 15 senior public health leaders inviting them to participate in the survey (Appendix J), which was sent as an embedded link using FluidSurveys™. A summary of the scoping review and findings was included as an attachment to the email (Appendix K). Thirteen of the public health leaders completed the survey. Given the limited number of studies (1) identified through the third update and the similarity of data extracted, the validation survey was not reissued following this update.

3.5.7 Qualitative synthesis (Phase 7): Advancing the methodology

After Phase 5 of the scoping review, when the extracted data had been themed and summarized, the findings provided a broad overview of the body of qualitative research and were interesting and potentially helpful, but they remained at a descriptive level. Motivated to lift the analysis to a more interpretive level, the researcher reread the 27 included studies several more times. The results and discussion sections of most of the studies contained rich descriptions of leadership that had not been fully captured in the previous data extraction processes and therefore analysis. Given that the aim of a qualitative evidence synthesis is “to arrive at a new or enhanced understanding about the phenomenon under study” (Coughlan et al., 2013, p. 1) and that it “has an ability to effect outcomes that are not feasible or possible in a single qualitative study” (p. 2), the researcher explored alternative methods of qualitative synthesis that could be used in an additional phase of the research project (i.e., adding a seventh phase to the scoping review framework).

Grant and Booth (2009) stated that a qualitative synthesis looks for themes or concepts across the individual studies, and the accumulated knowledge can lead to “the development of a new theory, an overarching ‘narrative’, a wider generalization or an ‘interpretative translation’” (p. 38). The method is interpretative in that it broadens understanding of a particular phenomenon, in this case public health leadership to address the social determinants of health and advance health equity. Although synthesizing the evidence from multiple qualitative primary studies is time consuming and complex, using these methods broadens the generalizability of qualitative research (Whittemore & Knafl, 2005). However, as this is an emerging field of inquiry, there is confusion about how the various synthesis methods compare to each other and how to choose one over the other (Coughlan et al., 2013).

The range of qualitative synthesis methods extends from aggregate approaches such as a metasummary to more interpretive approaches such as a metasynthesis or meta-ethnography (Saini & Shlonsky, 2012). Saini and Schlonsky (2012) identified several criteria to use in the decision-making process when selecting a synthesis method, including the epistemological and ontological stance of the researcher; whether there is a predefined research question (as opposed to an iterative one); and whether the intent of the synthesis is aggregative, integrative, or interpretive.

Sandelowski and Barroso (2007) described qualitative metasummaries and metasyntheses as two approaches to qualitative research synthesis. These approaches are used to integrate findings across a number of studies. A metasummary is defined as "a quantitatively oriented aggregation of qualitative findings that are themselves topical or thematic summaries or surveys of data" (Sandelowski & Barroso, 2007, p. 151). As an approach, a metasummary uses quantitative logic and thus reflects the frequency of findings across included studies. Higher frequencies of findings (e.g., descriptions of leadership at an individual level in this research study) would therefore contribute to the validity of the assertion that a pattern or theme exists (Sandelowski, 2001). Steps in a metasummary include: extract findings, group in common domains, and calculate frequencies. Qualitative metasummaries can be the outcome or endpoints of research synthesis studies or they can form an empirical foundation for a qualitative metasynthesis to follow (Sandelowski & Barroso, 2007).

Sandelowski and Barroso (2007) defined a qualitative metasynthesis as an "interpretive integration of qualitative findings that are themselves interpretive synthesis of data" (p. 151). Through the process of a metasynthesis, interpretations of findings across the included reports are offered. The result is a coherent description or explanation of the findings that can be useful

to the field (Thorne, 2009). In other words, the individual syntheses of the findings in each of the published research reports are pieced together into one or more metasyntheses. Thorne (2009) stated that "the qualitative synthesis movement seeks to create a systematic logic within which findings from distinct studies in a field can be rigorously integrated into stronger and more generalizable knowledge claims" (p. 571). The validity of a metasynthesis lies in the interpretive reasoning that is used and the way the findings are presented to those who will use the knowledge generated. A range of methods or techniques has been developed or can be used in a metasynthesis, which are chosen depending on the purpose of the project, the product to be produced, and the nature of the findings of the included studies (Dixon-Woods, Booth, & Sutton, 2007; Sandelowski & Barroso, 2007; Thorne, 2009).

Two factors influenced the decision to use a qualitative metasummary to integrate the qualitative findings of the 27 included studies. First, the studies were diverse in many dimensions including location and context, research method and design, participants, intervention, theoretical orientation, and how outcomes were reported (Sandelowski & Barroso, 2003). Second, the included studies had not been appraised for quality, which is recommended by some authors prior to conducting a metasynthesis. Sandelowski and Barroso (2007) noted that the product of a metasummary is an integration of research findings rather than a critique or comparative analysis.

From the findings of the scoping review and the rich description of leadership found in the literature set, two further research questions regarding leadership emerged to guide the qualitative synthesis, the metasummary: (1) How is leadership (and leaders) described in the literature set at an individual, organizational, community, and system level? and (2) What is the relationship between leadership and the outcomes? Using the thematic analysis process described

by Braun and Clarke (2005), the researcher reviewed the findings and discussion sections of the included studies. According to Braun and Clarke (2005), thematic analysis seeks to describe patterns across qualitative data and is a “more accessible form of analysis, particularly for those early in a qualitative research career” (p. 81). They advised retaining flexibility in the theming process. A theme is measured not by whether it is considered key but whether it captures something important in relation to the overall research question (Braun & Clarke, 2005). Thus, the research questions used to guide this phase were referred to often in the theming process.

A metasummary process involves summarizing the main results of each included study paper and then performing a thematic analysis (Sandelowski & Borraso, 2003). The 27 research studies were reviewed and detailed data extracted in response to the two additional research questions. An individual chart for each article in the literature set was created using a template (see Appendix L for an example of a completed template). This more in-depth and focused data extraction process provided additional detail to the data that had been extracted previously. Once the template was completed for each study, the data were merged into one large chart for ease of coding. More than 50 pages of data were then read by the researcher several times, and an initial set of data codes were drafted. In total, 510 data elements were extracted from the coding chart and coded to sticky notes (Appendix M). The majority of the data elements were verbatim extracts from the studies. Where the extracts were lengthy, the researcher paraphrased. At several points in the data extraction process, the researcher engaged one of the previous reviewers and the researcher’s supervisor in the coding process to ensure inter-rater reliability. All of the 510 data elements were entered into a spreadsheet to facilitate the thematic analysis process.

Preliminary theming occurred early in the process and was validated through reflection and consultation with those identified in the previous paragraph. An analytical framework was

developed to guide the thematic analysis. The analytical framework evolved as the analysis was carried out. This analytical framework was informed by the research questions guiding the synthesis: (1) How is leadership (and leaders) described in the literature set at an individual, organizational, community, and system level?, and (2) What is the relationship between leadership and the outcomes? The analytical framework was also informed by the findings of the scoping review, and preliminary coding and thematic analysis of the data. The words from the 510 data elements were entered into Tagxedo™ (2010), a free-access online program that creates word clouds, to reflect the frequency of words in the data elements and facilitate theming. This data visualization process proved very helpful in illuminating similarities and differences across themes and framework components. The findings from Phase 7 further validate the data analysis completed earlier in the scoping review and provide a deeper understanding of the literature set as elaborated in the next chapter.

CHAPTER 4 – Findings

This chapter is organized in six sections. The findings of the scoping review are presented in the first four sections: (1) study characteristics; (2) research questions, design, and theoretical frameworks; (3) aspects of public health leadership to address the determinants of health and advance health equity; and (4) tools, strategies, and mechanisms to support or develop public health leadership. Section 5 provides the results of the survey of public health leaders to validate the review findings related to leadership aspects and supportive tools and strategies. Finally, the metasummary findings with a deeper thematic analysis of the literature set are provided in Section 6.

For ease of reference, the 27 studies included in the scoping review are listed in Appendix N.

4.1 Study Characteristics

Public health leadership to advance health equity is an emerging field of inquiry with almost all of the studies (25/27, 93%) being published since 2009. Fifty-two percent of the studies (14/27) were published in either 2012 (6) or 2013 (8). One study was published in each of 2005 and 2007. However, it is important to note that several studies reported on research or program evaluations that had been conducted several years earlier than the publication date.

While geographic reach extended globally in the literature set, almost half of the studies (13/27) described research conducted in the United States. Two studies each were published from Canada, New Zealand, South Africa, the Netherlands, and the United Kingdom. There was one study from each of Australia, Jamaica, Sweden, and Uganda.

The 27 included studies were published in 22 journals. None were found in the explored grey literature. The largest group, four studies, was published in the *Journal of Public Health Management & Practice* (Bekemeier, Grembowski, Yang, & Herting, 2012; Goodman, 2009; Kuiper, Jackson, Barna, & Satariano, 2012; Yang & Bekemeier, 2013), two studies were published in *Health Promotion Practice* (Anderson-Lewis et al., 2012; Catalani et al., 2012), and two studies were published in the *American Journal of Public Health* (Sabo et al., 2013; Schmidt, Joosen, Kunst, Klazinga, & Stronks, 2010). The remaining 19 studies were published in 19 different journals. As a result of the wide range and number of journals in which the studies were published, they were difficult to locate.

Regarding the studies' settings and scopes, six studies (22%) were national in scope and 11 (41%) had a regional scope. A regional scope included those that considered a provincial, state, or health authority perspective in their investigation. Of the remaining 10 studies with a local scope or setting, six (22%) were conducted in an urban setting, three (11%) in a rural setting, and one (4%) multisite study included both rural and urban settings. Six of the included studies (22%) were part of larger studies or programs of research (Came, 2014; Davison et al., 2013; Downing et al., 2005; El Ansari, Oskrochi, & Phillips, 2009; Kaplan, Calman, Golub, Ruddock, & Billings, 2006; Lyons et al., 2013). Other publications from these larger studies were not found in the scoping review process.

4.2 Research Questions, Design, and Theoretical Frameworks

4.2.1 Research questions

The research questions that guided the 27 studies were generally descriptive and exploratory in nature. The intents generally expressed in the research questions and purposes were to "explore," "examine," "understand," and "identify." Figure 4-1 displays a word cloud

created from the words contained in the research purpose, aim, questions, and objectives of the 27 included studies. A total of 1,412 words were uploaded into Tagxedo™ to produce the word cloud. The words in the cloud are sized according to the frequencies of occurrence within the body of text; hence, the size of the font and the area of the word increase proportionally with frequency.

***Figure 4-1*. Word cloud for research purpose and questions in the included studies**

4.2.2 Research design

The 27 studies used a diverse range of research methods and designs. Table 4-1 provides a summary of the studies and the research methods used. A more detailed summary can be found in Appendix O.

Table 4-1. Summary of Research Methods Used in the Included Studies

Study (lead author)	Qualitative case study (n = 9)	Qualitative CBPR[a] (n = 3)	Qualitative other (n = 3)	Quantitative (n = 2)	Mixed methods (n = 5)	Program evaluation (n = 5)
Anderson-Lewis					✓[c]	
Bekemeier				✓		
Brassolotto			✓			
Brussoni	✓					
Came					✓	
Catalani		✓				
Davison		✓				
Downing	✓					
Draper						✓[e]
El Ansari						✓[f]
Gilbert	✓					
Goodman	✓					
Ingram		✓				
Jansson	✓					
Johns	✓					
Kaplan	✓					
Kuiper					✓[c]	
Lyons					✓[d]	
Martin						✓[e]
Nelson						✓[e]
Okal			✓			
Ransom	✓[b]					
Sabo					✓[c]	
Schmidt	✓					
Vermeer			✓			
Woodall						✓
Yang				✓		

[a]Community-based participatory research. [b]Multisite. [c]Qualitative and quantitative. [d]With a cluster randomized controlled trial. [e]Survey. [f]Quantitative.

More than half of the studies (15/27, 56%) used a qualitative research method. Of the 15 qualitative studies, nine (60%) used case study method, three (20%) used a community-based participatory research method, and three (20%) used other qualitative methods. In these studies, the research designs and methods included surveys, interviews, and focus groups, as well as document and website reviews and analysis. Several examples of the research methods are provided in the following paragraphs to illustrate the diversity of research methods and designs used. The research studies varied in size, scope, and number of participants. The variability in the studies reflects the diverse field where public health leadership plays out and the range of settings and actors in which action to address the social determinants of health and inequities may be examined.

Set in three rural Tasmanian communities, Johns (2010) used a case study design to explore factors that influence the development and sustainability of coordinated and collaborative community-based approaches to early childhood development. Data were gathered using interviews with managers, service providers, and parents, as well as participant observation and written documentation analysis. The article reported on both individual and cross-case analysis. In another example (Goodman, 2009), the research purpose was to compare patterns of implementation across community-based public health initiatives and to establish a construct for building capacity in racial and ethnic communities. In this study, Goodman asked, "What aspects of capacity are most relevant to grassroots public health initiatives spearheaded by local organizations in minority communities?" (p. E1). Eight sites in an urban setting in South Africa (four successful and four challenged) were selected for the case studies based on recommendations by community leaders. Using an open-ended interview protocol, Goodman

focused on the successes and challenges that community initiatives faced as they worked to achieve their goals.

Brassolotto et al. (2014) used a qualitative research design to examine “how differing understandings of the SDH [social determinants of health] can serve as epistemological barriers to local PHU [public health unit] activity on the SDH” (p. 4). In a Canadian research study, the researchers used purposive sampling and conducted 18 interviews with medical officers of health and lead staff persons from nine public health units in Ontario. The interview questions sought to elicit the participants’ constructions of the social determinants of health and their personal, professional, and community experiences and influences that inform these. To complement the data gathered through the interviews, the team conducted an extensive document review that included material from websites, research reports, public education materials, internal committee documents, position statements, operational plans, information sheets, logic models, terms of reference, and other materials.

Catalani et al. (2102) used a community-based participatory research method to enhance community engagement in health research and practice. The project was initiated by REACH – NOLA (Rapid Evaluation and Action for Community Health in New Orleans, Louisiana), a community-based participatory research and action partnership working to improve community health and access to quality health care in post-Katrina New Orleans. The research project used videovoice to meet the goals of: “1) engage a broad array of community members, including our partnership, neighbourhood residents, and local decision-makers, in dialogue around needs and assets; and 2) mobilize and act on identified public health and related needs and assets” (p. 20). The final product, a 22-minute film, was premiered before more than 200 city leaders and residents and is available on YouTube and as a DVD.

Five of the included studies (19%) were program evaluations. These program evaluations used a variety of research methods and study designs. For example, to reflect the context and innovative nature of the primary health care projects, one program evaluation used interviews, annual workshops, site visits, and in-depth case studies in four sites to conduct the external evaluation (Nelson et al., 2009). To evaluate a community-based physical activity program in South Africa, another team used a cross-sectional study design with naturalistic observation to clarify the context of the programs and how they operated, augmented with structured interviews and focus groups, as well as questionnaires with open-ended questions (Draper et al., 2009). In yet another example, the article reported on one part of a wider multisite evaluation of five Kellogg-funded community partnerships in South Africa (El Ansari et al., 2009). This program evaluation used a quantitative method involving 668 participants in a self-administered questionnaire that explored the relationship between leadership skills and 30 factors for success.

There were five studies (19%) that used mixed research methods. As part of a wider study conducted in New Zealand, Came (2014) used a mixed methods approach to explore where institutional racism occurs in policy development. The article reported on the part of the study that examined how institutional racism manifests in public health policy making and funding practice by "compiling master and counter narratives" (p. 215). Came described the methodological perspective of this work as "informed by kaupapa Maori theory (Smith, 1999) and the emerging fields of activist scholarship (Sudbury and Okazawa-Rey, 2009) and critical race theory (Ford and Airhihenbuwa, 2010)" (p. 215). The master narratives were compiled through document review and a semi-structured interview with a senior Crown official. Counter narratives were represented by first-person accounts from Maori health leaders that were

gathered using collaborative storytelling with nine senior Maori leaders and a Pakeha crone (feminist leader).

Sabo et al. (2013) investigated the impact of community health worker advocacy on community engagement to address health disparities. The team used a mixed method participatory research approach, where qualitative data were used to enhance quantitative findings, to answer the research questions: What is community health worker involvement in community-level advocacy? and What are the factors related to community health worker community advocacy that affect social determinants of health? The study used a far-reaching online cross-sectional semi-structured survey distributed through community health worker organizations in the United States, collecting data from 371 community health workers in 22 states. Advocacy stories were gathered to better articulate community health worker activities. The research ultimately created "an account of predictors of CHW [community health worker] advocacy, activities that lead to advocacy, and outcomes related to action on the SDH" (Sabo et al., 2013, p. e68).

Two included studies (7%) used quantitative research methods. To examine whether the type of local health department leader is related to reducing black–white disparities in mortality, Bekemeier et al. (2012) used secondary data to run linear regression models with an exploratory panel time-series design. To explore the association between characteristics of the top executives of local health departments and use of a wide range of activities towards addressing health disparities, Yang and Bekemeier (2013) conducted a cross-sectional, two-level, mixed linear model with secondary local health department data from a national profile of 2,332 local health departments.

Health equity (inequality, disparity) was a consideration in either the research question (aim or purpose) or in the study design for all of the included studies. In 78% of the studies (21/27), health equity was a consideration in the research question, aim, or purpose. For example, the research purpose for Gilbert et al. (2010) was "to examine the process of building the capacity to address health disparities in several urban African American neighborhoods" (p. 77). A further example is a case study (Schmidt et al., 2010) with the research questions: "(1) Which actors played a vital role in generating political priority for tackling health disparities?; (2) How did the actors frame the problem and possible solutions to gain political priority?; and (3) Which aspects of the context favored the generation of political priority?" (p. s211).

Equity was a consideration in the research design in 74% of the included studies (20/27). For example, Johns (2010) used a multiple case study design to "explore the factors that influence the development and sustainability of coordinated and collaborative community-based approaches to early childhood development in three Tasmanian rural communities" (p. 41). Given the exploratory and explanatory nature of the study, several communities were selected to represent as much diversity as possible. Participant observation and almost 150 interviews with managers, service providers, and parents were conducted, with cross-case analysis of the data reported. Another study (Brussoni et al., 2012) used a collaborative process evaluation to identify lessons learned in the implementation of an injury surveillance system. The data collection methods involved community members through focus groups and interviews, in addition to document reviews. The research was informed by Ownership, Control, Access, and Possession (OCAP) principles. Using OCAP principles as an approach provided control and self-determination over the research process for those involved in the research project. An evaluation conducted by Nelson et al. (2009) in New Zealand used a research and evaluation approach and

explored “the ways new models of nursing practice could help address health inequalities and contribute to Primary Health Care” (p. 291). The approach used by the independent evaluators engaged participants in the construction of knowledge, built on partnerships, and was designed to be consistent with “the Maori aspirations for research” (p. 292).

Table 4-2 contains a summary of how health inequity was described in the included studies. Only four studies (15%) did not provide a description. More than half of the studies (52%) referred to differences in the determinants of health when describing inequity. Almost as many (44%) considered avoidable or remediable health differences among groups or populations in their descriptions. Uneven access to health care was identified in 19% of the studies (5/27). Seven of the studies (26%) included more than one of description of health inequity.

Table 4-2 Summary of Health Inequity Descriptions in the Included Studies

Study (lead author)	Not described (*n* = 4)	Differences in determinants of health (*n* =14)	Unfair/avoidable health differences (*n* = 12)	Uneven access to health care (*n* = 5)
Anderson-Lewis		✓	✓	
Bekemeier			✓	
Brassolotto		✓	✓	
Brussoni	✓			
Came			✓	
Catalani		✓	✓	✓
Davison			✓	✓
Downing		✓		
Draper			✓	
El Ansari		✓		
Gilbert				✓
Goodman	✓			
Ingram		✓		
Jansson			✓	
Johns	✓			
Kaplan		✓		
Kuiper			✓	
Lyons		✓	✓	
Martin		✓		✓
Nelson				✓
Okal		✓		
Ransom	✓			
Sabo			✓	
Schmidt		✓		
Vermeer		✓		
Woodall		✓		
Yang		✓	✓	

4.2.3 Theoretical frameworks

A theory or framework was noted in 21 of the 27 included studies (78%). The theories or frameworks were used to guide the study, frame the analysis, or, in the case of three studies (Draper et al., 2009; Sabo et al., 2013; Vermeer et al., 2015), developed as an output of the research project. In the 21 studies citing a theory or framework, 28 different theories or frameworks were mentioned. Figure 4-2 provides a word cloud illustration of the theories and frameworks used in these studies.

***Figure 4-2*. Word cloud for theoretical frameworks used in the included studies**

Only two related studies with two of the same authors (Bekemeier et al., 2012; Yang & Bekemeier, 2013) used the same framework, *Conceptual Framework for Local Health Department Performance Improvement,* developed by Hajat et al. (2009). Two studies (Anderson-Lewis, 2012; Goodman, 2009) cited a community capacity building framework

although not developed by the same author. Six studies did not use or develop a theoretical or conceptual framework (Downing et al., 2005; Gilbert et al., 2010; Johns, 2010; Kaplan et al., 2006; Lyons et al., 2013; Okal et al., 2013). Given the number of studies that used a theoretical or conceptual framework, there appears to be interest in theories and their use. However, the wide range of theories and conceptual frameworks reflects the lack of consistency in the leadership literature in the choice of theory or its use.

4.2.4 Interventions and outcomes

To be included in the literature set, each research study had to describe an intervention and an intervention group, as well as report on outcomes. The following sections provide a description of what was found in this literature set.

Interventions

The 27 included studies focused on a number of different interventions. Forty-four percent of the studies (12/27) examined a program or service change (Anderson-Lewis et al., 2012; Brussoni et al., 2012; Downing et al., 2005; Draper et al., 2009; El Ansari et al., 2009; Kaplan et al., 2006; Kuiper et al., 2012; Martin et al., 2007; Nelson et al., 2009; Okal et al., 2013; Ransom et al., 2012; Woodall et al., 2012). The types of programs or services were diverse in their focus and scope, and included a syringe exchange program (Downing et al., 2005), childhood immunization (Ransom et al., 2012), injury surveillance (Brussoni et al., 2012), diabetes prevention (Kaplan et al., 2006), “Altogether Better” health promotion program (Woodall et al., 2012), and a walking intervention (Anderson-Lewis et al., 2012). Other studies included the examination of the establishment of primary health care nursing services (Nelson et al., 2009) and the implementation of a maternal health voucher program (Okal et al., 2013).

Action on the determinants of health was the focus of five studies (19%) (Brassolotto et al., 2014; Sabo et al., 2013; Schmidt et al., 2010; Vermeer et al., 2015; Yang & Bekemeier, 2013). The actions included political priority setting (Schmidt et al., 2010), sustainability of community health programs (Vermeer et al., 2015), community health worker advocacy (Sabo et al., 2013), and an examination of the worldview and ideology of public health unit leaders and officials (Brassolotto et al., 2014). Policy or policy advocacy was the focus of four studies (15%) (Came, 2014; Jansson et al., 2011; Kuiper et al., 2012; Schmidt et al., 2010), which included a national public health policy (Jansson et al., 2011) and institutional racism in organizational policy-making process (Came, 2014).

Partnership as an intervention was explored in three of the studies (11%) (Catalani et al., 2012; El Ansari et al., 2009; Gilbert et al., 2010) and included an example where partnerships were used to enhance engagement in research (El Ansari et al., 2009). Community engagement (Schmidt et al., 2010; Vermeer et al., 2015) and intersectoral collaboration (Johns, 2010; Vermeer et al., 2015) as an intervention were each explored in two studies. One study reported on a leadership training event (Ingram et al., 2014), and another on the development of leadership hubs as part of a larger study (Davison et al., 2013).

Intervention groups

The intervention groups varied across the studies. The whole of society was the intervention group in two studies (Brassolotto et al., 2014; Kuiper et al., 2012). An identified population or specific community was the intervention group in 22 studies (82%). For example, children and youth were the identified population in three studies (Draper et al., 2009; Johns, 2010; Ransom et al., 2012). Other examples included the underserved and poor (Martin et al., 2007), neighbourhoods with a high deprivation score (Schmidt et al., 2010), a post-Hurricane

Katrina neighbourhood in New Orleans (Catalani et al., 2012), and injection drug users in a specific community (Downing et al., 2005). An organization was the intervention group in two studies (Gilbert et al., 2010; Goodman, 2009), and a government in one study (Lyons et al., 2013).

Outcomes

Each of the 27 included studies described outcomes. After reviewing the studies and compiling a list of outcomes, the researcher met with the other reviewers and agreed upon a set of outcome codes (9) to use in data extraction. Table 4-3 charts the 27 studies to the six most frequently cited outcome themes. Intersectoral collaboration was the most frequently reported outcome. It was reported in 16 studies (60%), followed by policy change in 13 studies (48%). A change in health status or health measure was reported or anticipated in 12 of the studies (44%), and capacity building in 11 studies (41%). Action, such as implementation of a program or policy, initiation of a project, or an advocacy action, was reported in 10 studies (37%). Empowerment was observed or reported in 30% of the studies. Twenty-one studies (78%) reported on more than one outcome, with two studies identifying five different types of outcomes. Six studies (22%) reported on one type of outcome only.

The level where the outcomes happened was also considered (Table 4-4). More studies reported outcomes at the community level (12/27, 44%) compared to the organizational level (9/27, 33%) or individual level (5/27, 19%). The level of the outcome was not identified in 11 studies (41%).

Table 4-3. Summary of Outcomes Reported in the Included Studies

Study (lead author)	Health change (n = 12)	Empower-ment (n = 8)	Action (n = 10)	Policy change (n = 13)	Intersectoral collaboration (n = 16)	Capacity building (n = 11)
Anderson-Lewis					✓	✓
Bekemeier	✓					
Brassolotto	✓			✓		
Brussoni	✓	✓			✓	✓
Came		✓		✓	✓	
Catalani					✓	
Davison			✓	✓	✓	✓
Downing			✓	✓	✓	
Draper			✓			
El Ansari			✓	✓	✓	✓
Gilbert	✓				✓	✓
Goodman			✓	✓		✓
Ingram		✓		✓	✓	
Jansson		✓		✓	✓	
Johns					✓	✓
Kaplan	✓		✓	✓	✓	
Kuiper			✓			
Lyons	✓	✓	✓	✓		✓
Martin	✓				✓	✓
Nelson	✓					
Okal	✓					
Ransom	✓			✓		
Sabo		✓		✓	✓	✓
Schmidt			✓	✓		
Vermeer	✓	✓			✓	
Woodall	✓	✓			✓	✓
Yang			✓			

Table 4-4. Summary of Outcome Levels in the Included Studies

Study (lead author)	Not identified (n = 11)	Individual (n = 5)	Community (n = 12)	Organization (n = 9)
Anderson-Lewis	✓			
Bekemeier	✓			
Brassolotto				✓
Brussoni			✓	✓
Came		✓	✓	
Catalani	✓			
Davison		✓	✓	✓
Downing			✓	
Draper	✓			
El Ansari			✓	✓
Gilbert				✓
Goodman			✓	
Ingram			✓	
Jansson			✓	
Johns	✓			
Kaplan		✓	✓	✓
Kuiper	✓			
Lyons	✓			
Martin		✓		✓
Nelson	✓			
Okal	✓			
Ransom		✓		✓
Sabo			✓	✓
Schmidt			✓	
Vermeer			✓	
Woodall	✓			
Yang	✓			

4.3 Aspects of Public Health Leadership to Advance Health Equity

Data were extracted from the 27 articles that described either leaders or leadership, or both, with three themes emerging. Leadership to advance health equity, as described in this literature set (1) requires specific leader attributes, (2) is relational, and (3) possesses particular knowledge. Table 4-5 provides a summary of the main findings for each of these leadership aspects, and they are described in more detail below.

4.3.1 Leadership attributes

In the literature set, 24 studies (89%) identified characteristics of effective leaders. These characteristics were analyzed and grouped into six encompassing attributes. Descriptions from the studies elaborate on each attribute.

Visionary, passionate, charismatic, able to inspire, and are motivated to be involved

As described in the literature set, leaders:

- hold a vision (Brussoni et al., 2012; Draper et al., 2009; Goodman, 2009; Kaplan et al., 2006; Kuiper et al., 2012; Ransom et al., 2012; Vermeer et al., 2015) that is coupled with commitment (Draper et al., 2009; Goodman, 2009; Kaplan et al., 2006; Schmidt et al., 2010);
- use their passion to create and foster empowering strategies (Draper et al., 2009; Kuiper et al., 2012);
- are persuasive (Goodman, 2009; Kaplan et al., 2006), visible (Draper et al., 2009), strategic (Kaplan et al., 2006), inspiring (Draper et al., 2009; Kuiper et al., 2012; Woodall et al., 2012), and powerful (Kaplan et al., 2006);
- are creative, innovative, and work to achieve common goals (Anderson-Lewis et al., 2012; Brussoni et al., 2012; Kaplan et al., 2006; Vermeer et al., 2015);

- show courage and are fearless (Downing et al., 2005; Draper et al., 2009; Goodman, 2009; Kuiper et al., 2012);
- are able to foster change (Kuiper et al., 2012; Lyons et al., 2013; Vermeer et al., 2015; Woodall et al., 2012); and
- act as project champions (Brussoni et al., 2012; Vermeer et al., 2015).

Trusted, respected, and credible

As described in the literature set, leaders:

- are reliable, open, and trusted (Catalani et al., 2012; Gilbert et al., 2010; Jansson et al., 2011; Johns, 2010) in a way not usually possible for professionals (Draper et al., 2009);
- build trust through high professional calibre (Kuiper et al., 2012);
- foster trust between health professionals and community leaders (Downing et al., 2005; Vermeer et al., 2015);
- are listened to within their organizations (Nelson et al., 2009; Sabo et al., 2013);
- respect others and act as a role model (Kuiper et al., 2012); and
- build trust through providing participatory research findings that legitimized intervention (Downing et al., 2005).

Effective communicator

As described in the literature set, leaders:

- are able to market a vision and goals (Kuiper et al., 2012);
- provide updates, newsletters, and mailings (Woodall et al., 2012);
- express ideas, opinions, and beliefs effectively (El Ansari et al., 2009; Martin et al., 2007; Sabo et al., 2013); and

- engage with the community (Downing et al., 2005) through active listening (Came, 2014).

Humble, caring, and patient

As described in the literature set, leaders:

- value human dignity (Goodman, 2009);
- are selfless (Goodman, 2009);
- show love, caring, and concern (Draper et al., 2009);
- exhibit patience, which, in turn, contributes to actions being well timed (Kuiper et al., 2012); engage community members; and develop trust in hard-to-reach communities (Woodall et al., 2012).

Values orientation

As described in the literature set, leaders:

- work from a value base (Goodman, 2009); Kaplan et al., 2006) of solidarity and social justice (Davison et al., 2013);
- have a disposition, decision-making style, and ethos that are consistent (Goodman, 2009); and
- are guided by values and an ethos of service and volunteerism (Kaplan et al., 2006).

Political and connected with the community

As described in the literature set, leaders:

- connect organizational mission and resources to the community context (Kuiper et al., 2012);
- use political advocacy (Downing et al., 2005; Ingram et al., 2014; Kuiper et al., 2012);

- develop plans that accommodate a wide range of public opinions (Brussoni et al., 2012; Downing et al., 2005; Lyons et al., 2013; Okal et al., 2013; Vermeer et al., 2015);
- have authority within the community and access to local power and resources (Downing et al., 2005; Kaplan et al., 2006), and keep health on the community's agenda (Vermeer, et al., 2015);
- are confident (Draper et al., 2009) and community driven (Brussoni et al., 2012);
- understand the sanctity of community identity and heritage (Goodman, (2009); and
- understand the importance of neighbourhood stability and family orientation (Goodman, 2009).

Table 4-5. Summary of Leadership Aspects Identified in the Included Studies

Leadership attributes (n = 24, 89%)	Relational aspects (n = 22, 82%)	Knowledge (n = 13, 48%)
Visionary, passionate, charismatic, able to inspire, and are motivated to be involved (13 studies)	Leaders are skilled at developing relationships and bring relationships with them. They know who to talk to and are able to reach out. (6 studies)	Contextual knowledge (9 studies)
Trusted, respected, and credible (10 studies)	Leaders engage at multiple levels, including the political and executive level, and are seen as protective, supportive, and empowering. (5 studies)	Clinical knowledge (2 studies)
Effective communicator (6 studies)	Leaders are community champions and use/utilize a participatory approach to engage the community and build social capital. (8 studies)	Situational knowledge (5 studies)
Humble, caring, and patient (4 studies)	Leaders work in partnership and collaboration with the community and other organizations and sectors. They build coalitions and "bridges" between communities, leaders, organizations, and other sectors. (11 studies)	
Values orientation (3 studies)	Leaders lead events and activities, and provide support to individuals and staff. They effectively use negotiation and conflict resolution skills. (6 studies)	
Political and connected with the community (11 studies)		

4.3.2 Relational aspects

Leaders' ability to develop, encourage, support, and recognize the importance of relationships at personal, organizational, community, and system levels is described in 22 of the studies (82%). Five groupings of relational aspects emerged from the data set and are described in more detail below.

Leaders are skilled at developing relationships and bring relationships with them. They know who to talk to and are able to reach out.

- Leaders bring relationships with them (Kaplan et al., 2006) and are skilled at developing relationships (Came, 2014; Kaplan et al., 2006).
- They know who to talk to (Sabo et al., 2013) and are able to reach out (Okal et al., 2013).
- Leaders are well connected and able to foster trust between health professionals and church leaders who then convene large numbers of people (Kaplan et al., 2006).
- Community health workers are members of their communities and are trusted leaders (Ingram et al., 2014).
- Leaders are described as well networked, and they use a combination of content (e.g., diabetes) and issues (e.g., disparities and discrimination) to connect (Kaplan et al., 2006) and to build coalitions (Vermeer et al., 2015).
- Leaders are respected, and they respect others and act as role models (Kuiper et al., 2012).

Leaders engage at multiple levels, including the political and executive level, and are seen as protective, supportive, and empowering.

- Leadership at multiple levels is essential, and where leadership is absent, there is an association with "powerlessness" of staff (Ransom et al., 2012).
- Leaders contribute a nursing voice to policy and strategy (Nelson et al., 2009).
- Relationships with local politicians are important (Ransom et al., 2012).
- Leaders engage at all levels, including the political and executive level, and they are seen as protective, supportive, and empowering (Kuiper et al., 2012).
- Public health leadership occurs at national, district, and community levels (Okal et al., 2013).
- Leadership at the highest level of an organization makes a difference in health outcomes (Downing et al., 2005).

Leaders are community champions and use/utilize a participatory approach to engage the community and build social capital.

- Leaders act as a community champion (Jansson et al., 2011) and take action, engaging with the community in decision making (Ingram et al., 2014; Ransom et al., 2012; Vermeer et al., 2015).
- Leaders create positive peer pressure to continue (Brussoni et al., 2012) and actively bring people together to solve problems (Sabo et al., 2013; Schmidt et al., 2010; Woodall et al., 2012).
- Leaders advocate to government, to the community, and to staff (Kuiper et al., 2012).

Leaders work in partnership and collaboration with the community and other organizations and sectors. They build coalitions and "bridges" between communities, leaders, organizations, and other sectors.

- Leaders work in partnership (El Ansari et al., 2009; Martin et al., 2007; Ransom et al., 2012) and in collaboration with the community (Brussoni et al., 2012; El Ansari et al., 2009; Ransom et al., 2012).
- Partnership and collaboration are part of their personal mission (Ransom et al., 2012).
- They have skills to build coalitions with a wide variety of community organizations (Downing et al., 2005; El Ansari et al., 2009; Vermeer et al., 2015).
- They talk with people informally (Woodall et al., 2012) and are able to "build bridges" leader to leader and through interagency and cross-sector partnerships (Kuiper et al., 2012).
- Leaders build social capital (Johns, 2010), are reflective (Nelson et al., 2009), build common vision and goals (Draper et al., 2009), and use participatory and democratic decision making as well as being team oriented (Goodman, 2009; Vermeer et al., 2015).
- Being relational includes being situated, relational personhood, and relational autonomy, and results in relational solidarity (Davison et al., 2013).

Leaders lead events and activities, and provide support to individuals and staff. They effectively use negotiation and conflict resolution skills.

- Leaders are able to negotiate and are solution oriented at multiple levels (Brussoni et al., 2012).
- They use negotiation and conflict resolution (Martin et al., 2007).

- They provide leadership to events and activities, and provide intensive support to individuals (Woodall et al., 2012).
- Leadership was identified as a key to successful implementation of programs and services (Downing et al., 2005; Vermeer et al., 2015).
- Leaders are listened to by their organizations (Sabo et al., 2013).

4.3.3 Knowledge of the leader

Different aspects or dimensions of knowledge of the leader were revealed in almost half of the studies (13/27). The knowledge of the leader clustered into three broad areas: (1) contextual knowledge or knowledge of the community/setting in which they are working, (2) clinical knowledge or the knowledge that was garnered through formal education and practice, and (3) situational knowledge or knowledge of the immediate organizational and social environment as well as the current theoretical and empirical evidence. Descriptions of these different types of knowledge from the literature set are provided below.

Contextual knowledge

- Leaders have knowledge about the community (Anderson-Lewis et al.; 2012; Ingram et al., 2014; Woodall et al., 2012).
- Leaders gain knowledge about the community through a community health assessment (Yang & Bekemeier, 2013).
- Leaders are highly aware and supportive (Kuiper et al., 2012).
- Leaders raise awareness of issues (Sabo et al., 2013), engage with the community (Okal et al., 2013), and use multiple forms of evidence and knowledge (Came, 2014; Jansson et al., 2011).

Clinical knowledge

- Leaders who have a clinical background and advanced education are associated with positive differences in community health outcomes (Bekemeier, et al., 2012; Nelson et al., 2009).

Situational knowledge

- Leaders are organized and effective managers (Draper et al., 2009; El Ansari et al., 2009; Martin et al., 2007).
- Leaders in public health understand and apply the concepts of cultural competence (Came, 2014), health equity, and social and structural determinants of health (Yang & Bekemeier, 2013).

4.4 Tools, Strategies, and Mechanisms to Support or Develop Public Health Leadership

Three quarters of the studies (20/27) reported on tools, strategies, or mechanisms that were used to facilitate, support, or develop leaders and leadership. The diverse strategies, tools, and mechanisms described in the literature set, some that are readily available in public health organizations, were grouped into eight categories. More details about these supportive elements are given below.

4.4.1 Policy and program development and implementation

- Government policy (Brussoni et al., 2012; Came, 2014; Okal et al., 2013; Schmidt et al., 2010) and
- Organizational policy (Came, 2014; Kuiper et al., 2012; Okal et al., 2013; Schmidt et al., 2010).

4.4.2 Accreditation, quality improvement, and evaluation

- Accreditation and quality improvement processes (Bekemeier, et al., 2012; Ingram et al., 2014; Martin et al., 2007; Okal et al., 2013) and
- Program evaluation and logic models (Draper et al., 2009).

4.4.3 Workforce and practice development

- Job requirements and efforts to enhance the knowledge, skills, and diversity of the public health workforce (Bekemeier, et al., 2012; Came, 2014; Sabo et al., 2013);
- Professional standards (Bekemeier, et al., 2012; Brassolotto et al., 2014; Came, 2014; Sabo et al., 2013);
- Training for senior leaders in the area of social and structural determinants of health and health equity (Came, 2014; Yang & Bekemeier, 2013);
- Training, support, time, and empowerment model (Brussoni et al., 2012; Woodall et al., 2012); and
- Leadership development (Yang & Bekemeier, 2013).

4.4.4 Processes, structures, and service delivery models that support collaboration, partnership, and engagement with communities and other sectors

- Development of programs, services, and project structures (Brussoni et al., 2012; Davison et al., 2013; Johns, 2010);
- Leadership hubs (Davison et al., 2013);
- Formal coalitions (Vermeer et al., 2015); and
- Innovative nursing service (Nelson et al., 2009).

4.4.5 Access to and sharing of evidence, research, and information about the community and/or population

- Resources and access to information and knowledge about population characteristics (Yang & Bekemeier, 2013) and
- Provision of information to the community in relevant ways and with follow-up resulting in increased understanding (Lyons et al., 2013).

4.4.6 Conceptual and theoretical frameworks that guide decision making and action

- Conceptual and theoretical frameworks to guide work and action (Ingram et al., 2014; Sabo et al., 2013) and
- Empowerment model (Woodall et al., 2012).

4.4.7 Community-based participatory research for capacity building as a strategy for capacity building

- Use of community-based participatory research as a strategy for capacity building (Anderson-Lewis et al., 2012) and
- Videovoice and production and dissemination of YouTube videos (Catalani et al., 2012).

4.4.8 Active discussion and discourse about values, ideology, and politics

- Active discussion of values, ideology, and politics; use of research and evidence; centralizing leadership; and decision making (Brassolotto et al., 2014).

4.5 How are leaders developed or supported?

The majority of studies (20/27, 74%) included some description of how leadership to advance health equity was supported or developed. In almost half of the studies (12/27), leadership was developed through formal training and education, and through experience in 37% of the studies (10/27). The organizational or community environment in which leaders were situated was identified by 30% of the studies (8/27) as contributing to growth in leadership capacity. Some studies also mentioned mentoring relationships (11%) and networks (7%) as supports. Table 4-6 provides a summary of how leadership was developed or supported in the included studies.

Table 4-6. Summary of Leadership Development and Support in the Included Studies

Study (lead author)	Not identified (n = 8)	Education/ training (n = 12)	Experience (n = 10)	Mentoring (n = 3)	Networks (n = 2)	Environment (n = 8)
Anderson-Lewis		✓				
Bekemeier		✓	✓			
Brassolotto	✓					
Brussoni		✓		✓		✓
Came		✓				✓
Catalani		✓				
Davison					✓	
Downing			✓			✓
Draper	✓					
El Ansari		✓				✓
Gilbert			✓	✓		✓
Goodman			✓			
Ingram		✓	✓			✓
Jansson			✓			
Johns						✓
Kaplan	✓					
Kuiper		✓				
Lyons	✓					
Martin	✓					
Nelson		✓				
Okal	✓					
Ransom	✓					
Sabo		✓	✓			✓
Schmidt			✓			
Vermeer	✓					
Woodall		✓	✓	✓	✓	
Yang		✓	✓			

4.6 Validation of the Findings: Survey Results

As discussed, data extracted from the 26 included studies before the third update were collated and analyzed using three analysis questions: (1) What research questions, design, and theoretical frameworks are used to understand public health leadership to advance health equity?; (2) What aspects of leadership are present in this literature set?; and (3) What tools, strategies, or mechanisms are used to develop or support public health leadership to advance health equity? For the validation phase (Phase 6) of the scoping review, findings that emerged in response to Questions 2 and 3 were shared with a purposive sample of senior public health leaders through an online survey. Respondents were asked to indicate their level of agreement with the findings from their practice and experience. The survey also provided an opportunity for the senior public health leaders to reflect on their experience and identify any strengths or gaps they perceive in the findings as well as provide comments and/or examples. The survey was not repeated after the third update due to the low number of citations (1) found and the fact there were no new findings from this one additional study.

This portion of the research project was approved on ethical grounds by the University of Saskatchewan Research Ethics Board. Participation in the survey was voluntary; the respondents could decide not to participate at any time by closing their browser or choosing not to answer any questions causing them discomfort. The survey link was sent to 15 senior public health leaders in Canada. The following section provides a summary of the results of the survey that was completed by 13 of these senior public health leaders, a response rate of close to 87%.

The scoring for this validation survey was on a 10-point Likert-type scale with a score of 1 representing *totally disagree* and 10 representing *totally agree*. After each question there was an opportunity to provide a comment and/or example from the respondent's practice and

experience. The comment section on 24 of the questions in the survey was optional; however, eight of the respondents (62%) provided a comment to each of the questions. All respondents who started the survey completed the entire survey.

The first three survey questions asked about demographic information. The respondents included representation from environmental health (1), medicine (1), nursing (7), health promotion (2), and other (2). The respondents who self-identified as *other* included a national-level public health leader and a non-discipline-specific knowledge translation expert.

The majority of respondents (8 or 62%) had more than 20 years of experience in the field; three (23%) had 11-15 years, and two (15%) had between 6 and 10 years of experience. The geographic representation was heavily weighted by nine individuals residing in provinces from Manitoba west (70%). Two respondents were from Ontario/Quebec (15%), and two self-identified as national (15%).

4.6.1 Aspects of leadership

Aspects of leadership described in the literature set fall into three major categories: attributes of the leader (in six broad subcategories), relational aspects of leadership (in five broad descriptive statements), and knowledge of the leader (in three types of knowledge). The following sections present the findings of the validation survey for each of these categories.

Leadership attributes

1) Visionary, passionate, charismatic, able to inspire, and are motivated to be involved

In the overall description derived from the literature set, leaders:

- hold a vision that is coupled with commitment;
- use their passion to create and foster empowering strategies;
- are persuasive, visible, strategic, inspiring, and powerful;

- are creative, innovative, and work to achieve common goals;
- show courage and are fearless;
- are able to foster change; and
- act as project champions.

This attribute was scored high by the respondents with 23% (*n* = 3) scoring it at 9 and 77% (*n* = 10) scoring it at 10 *(totally agree)*. The average score across the 13 respondents was 9.8. Comments (*n* = 9) spoke to the importance of articulating a clear vision to all, including the public and those who may be vulnerable or disenfranchised. Further, leaders need to be "committed to seeing this vision through over time," as this "is important to enable staff who may want to work on a specific strategy to be given the legitimacy to spend their time there, and encourage their innovation and productivity" (Respondent 12). Respondents said that supportive mentors and the courage to "battle" or "go against" the status quo or take risks was important. With a goal of change, leaders battle the status quo of classism, racism, and oppression (Respondent 6). They have a "critical conscience" and the ability to inspire and enable others. The concepts of leadership/followership as described by Robert E. Kelley were presented in the context of helping to create a fluid environment where "the person in the best position to be effective rises to the occasion [and] will be allowed the opportunity to take the lead" (Respondent 7). Current systems and structures have resulted in large inequities, and the work to dismantle these systems requires strategic and innovative community involvement (Respondent 6).

Other attributes identified included the ability to motivate, inspire, and allow the space for innovation to occur. Respondents related to this type of leader attribute in their work environment and in their volunteer work with professional associations.

2) *Trusted, respected, and credible*

In the description provided from the literature set, leaders:

- are reliable, open, and trusted in a way not usually possible for professionals;
- build trust through high professional calibre;
- foster trust between health professionals and community leaders;
- are listened to within their organizations;
- respect others and act as a role model; and
- build trust through providing participatory research findings that legitimized intervention.

The level of agreement with this attribute of a leader was scored from 7 to 10 (*totally agree*), with an average score of 9.4. One person (8%) each scored at 7 and 8, with 23% scoring at 9 (n = 3); and 61% at 10 (n = 8). Comments (n = 8) emphasized the time required to earn credibility, although, if the leader is already known and trusted (i.e., has a track record), this process is expedited. Trust was a theme in the context of knowing that the leader is consistent about priority issues, will "have your back," and could be relied upon in a crisis. "Part of trust involves knowing when to speak out and when to stay more silent, so that you are listened to when you choose to speak out" (Respondent 12). The description was identified by one respondent as essentially being the other side of the coin to courage and innovation. The need to use reliable data, evidence, and community knowledge was emphasized by multiple respondents and was tied to the ability to inspire. The importance of action, intentionality, and relationships with community members was stressed.

3) *Effective communicator*

In the description provided from the literature set, leaders:

- are able to market a vision and goals;

- provide updates, newsletters, and mailings;
- express ideas, opinions, and beliefs effectively; and
- engage with the community through active listening.

This attribute scored from 8 to 10. Two respondents (15%) scored the attribute at 8, two (15%) at 9, and nine (70%) scored at 10. The average score was 9.5. This attribute was identified in the comments (*n* = 10) as a "critical dimension of the leader's role" and requires conscious effort (Respondent 1). Ways of communicating included such techniques as active listening, reading non-verbal cues, and motivating or galvanizing others to action. Other attributes identified included the importance of tailoring the message to the audience, using current forms of communication, and being respectful in both messaging and issues of disagreement. Being able to "pitch the message at the right level for the audience they are primarily trying to reach at a given event, and read that audience on the fly to gauge whether they are being reached" was identified as a leadership skill (Respondent 12). To promote health equity, a leader requires the ability to inspire "a diverse network of sector and community actors that change is possible … this requires effective communication skills" (Respondent 5). Several comments suggested that mailings and newsletters may be out-of-date methods of communication.

4) Humble, caring, and patient

In the description provided from the literature set, leaders:

- value human dignity;
- are selfless;
- show love, caring, and concern; and
- exhibit patience, which, in turn, contributes to actions being well timed; engage community members; and develop trust in hard-to-reach communities.

This attribute had the widest range of responses with one respondent (8%) scoring the level of agreement at 5, one (8%) at 6, two each (15%) at 7 and 8, one at 9 (8%) and 6 (46%) at 10. The average score was 8.5. The comments (n = 8) reflected the range of responses. Two respondents focused on the concept and value of humility while recognizing that it might manifest differently at different times, with different disciplines and different genders. For example, it was viewed as critical to be humble when working with clients, but this same humility could be seen as a negative attribute if one did not speak up or present information when working with decision makers and policy makers.

Some respondents struggled with the language used to describe the attribute of caring; in particular, the word "love" was negatively interpreted at times with reluctance to ascribe this to one's work. Others embraced the language suggesting that "love for community and caring for each other is an essential part of committing to this long term work" (Respondent 6). Respondents who commented on patience did so in the context of recognizing the time it takes to effect meaningful change. "Effective leaders realize that they need to take the long view and take advantage of opportunities when they present themselves, and not force the issue all the time" (Respondent 12).

5) Values orientation

In the description provided from the literature set, leaders:

- work from a value base of solidarity and social justice;
- have a disposition, decision-making style, and ethos that are consistent; and
- are guided by values and an ethos of service and volunteerism.

Fifty-four percent of respondents (n = 7) scored this attribute at 10, two (15%) scored at 9, one (8%) at 8, two (15%) at 7, and one (8%) at 6. The average score was 8.9. The comments

(*n* = 9) were strong in supporting a discipline rooted in social justice: "All public health disciplines are guided by social justice – figuring out what that means in practice is essential to health equity promotion" (Respondent 6). Several commented that, although this is the ideal, it is not always present in practice. One suggested this attribute reflects an orientation to a particular set of values required to inform and drive action, and that "social justice" should figure more prominently in the naming of the attribute. There were conflicting responses to the idea of service, with some embracing the work as a passion or calling while others clearly did not agree with this. One commented that "an ethos of service and volunteerism, leads to 'I can do that....' rather than that is not my role. These values will be the basis for striving for social justice and fairness, in a time of limited resources" (Respondent 11).

6) Political and connected with the community

In the description derived from the literature set, leaders:

- connect organizational mission and resources to the community context;
- use political advocacy;
- develop plans that accommodate a wide range of public opinions;
- have authority within the community and access to local power and resources, and keep health on the community's agenda;
- are confident and community driven;
- understand the sanctity of community identity and heritage; and
- understand the importance of neighbourhood stability and family orientation.

There was strong agreement with this attribute by the respondents with three scoring it at 8 (23%), one (8%) scoring it at 9, and nine (69%) scoring it at 10. The average score was 9.5. The comments (*n* = 5) reflect a strong belief that "community involvement – particularly with

those who have been disadvantaged by policies – is essential to change the status quo" (Respondent 6). Successful leadership requires the leader to have the skills to garner support from a range of stakeholders and the community, and to find the best way to move forward without holding out for the perfect solution (Respondent 12). One respondent suggested that political savvy and the ability to advocate be split from this attribute and be put with the ability to manage strategic change. Another respondent suggested a stronger emphasis on policy as an appropriate lever to use when society is the client. "Need for political action to result in improvements for the community/society at large, so leaders need to participate in policy development, implementation and evaluation" (Respondent 7).

Figure 4-3 compares the average scores across the six categories of leadership attributes.

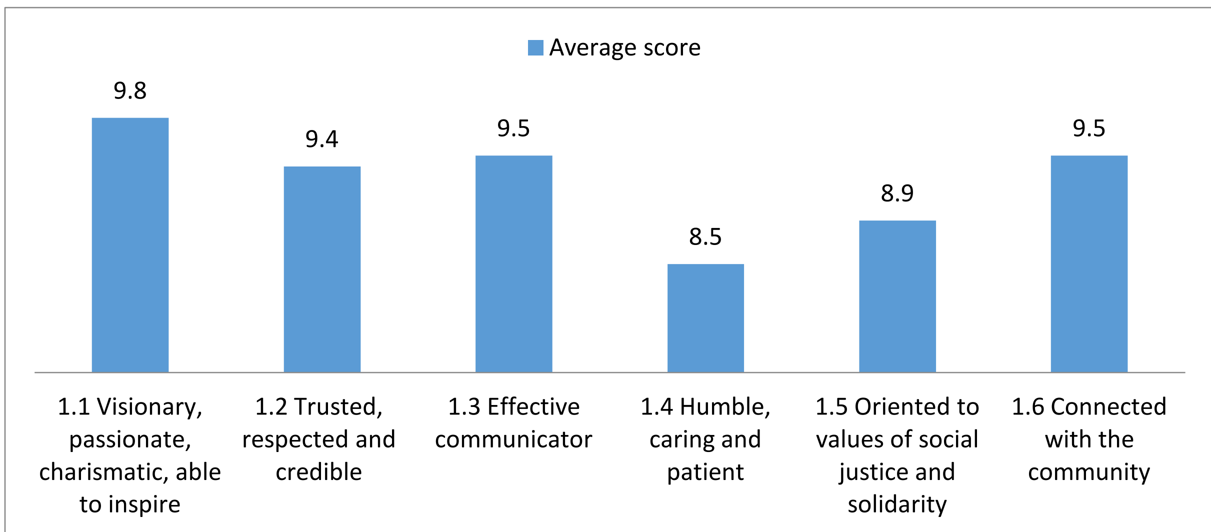


***Figure 4-3*. Average agreement scores for leadership attributes**

Relational aspects

Five relational aspects of leadership to advance health equity were described in the literature set.

1) Leaders are skilled at developing relationships and bring relationships with them. They know who to talk to and are able to reach out.

This aspect of leadership had a high level of agreement from the respondents. Eight (62%) scored it at 10 (*totally agree*), and four (31%) scored it at 9. The average score was 9.7. The comments (n = 7) reflected the essential nature of this aspect of leadership. Respondents suggested adding an aspect of nurturing relationships and the critical importance of mutuality in relationships. One respondent suggested considering Malcolm Gladwell's (2000) categories of “maven” or “connectors” (Respondent 9). Leaders not only know who to talk to but also who to listen to. Effective leaders were described as strong connectors, who know the key decision makers as well as how disparate issues are linked (Respondent 12). The respondents commented on the range in the capability of leaders to manifest this.

2) Leaders engage at multiple levels, including the political and executive level, and are seen as protective, supportive, and empowering.

Respondents scored this aspect of leadership between 6 and 10. One respondent (8%) scored at 6, four (30%) at 8, one (8%) at 9, and seven (54%) at 10. The average score was 9. The comments (n = 10) amounted to the largest number of comments in the validation survey. There was some confusion and concern expressed about the term “protective.” It was interpreted as potentially protective of communities, staff, or self, with differing connotations attached to each. Several respondents stressed the importance that leaders “have your back especially when you want to think and act out of the box” (Respondent 11) and that “staff needs to know the leader has their back when pushback occurs, especially when the work leans toward advocacy” (Respondent 13). A suggestion was made to revise the statement to read “Leaders engage

political and executive levels along with mid-management and community levels to build protective, supportive and empowering relationships" (Respondent 6).

3) *Leaders are community champions and use/utilize a participatory approach to engage the community and build social capital.*

This aspect of leadership scored between 6 and 10, with 78% (n = 9) scoring at 10, and one respondent (8%) each scoring at 6 to 9. The average score was 9.2. The comments (n = 6) primarily focused on the importance of supporting this approach, although the leader might not be directly involved in the implementation. This type of leader recognizes the essential nature of engaging those affected whether it is with individuals, communities, populations, or staff within organizations. One respondent commented that leaders encourage and inspire others to lead.

4) *Leaders work in partnership and collaboration with the community and other organizations and sectors. They build coalitions and "bridges" between communities, leaders, organizations, and other sectors.*

This aspect of leadership scored very high, with three respondents (33%) scoring it at 9 and 10 respondents (77%) scoring it at 10 (*totally agree*). The average score was 9.8. Comments (n = 6) pointed out that, although this kind of building is sometimes difficult to achieve, it is essential to facilitate program effectiveness. With the broadest definition of sectors, leaders must look wide, far, and deep for partnerships. Inherent in this aspect of leadership is an understanding of power and privilege required for health equity promotion. Leaders for health equity benefit from learning from others. One respondent pointed out that, in the Canadian context, strong leaders are needed to modify current approaches and build coalitions with indigenous communities because power and privilege have not been shared (Respondent 6).

5) *Leaders lead events and activities, and provide support to individuals and staff. They effectively use negotiation and conflict resolution skills.*

The majority of respondents (62%) scored this aspect of leadership at 10, with two (15%) scoring at 7, one (8%) at 8, and two (15%) at 9. The average score was 9.2. Comments (n = 7) questioned whether this was a role of a leader or that of a manager, and stressed the importance of support and negotiation with and on behalf of others. There was also the recognition that it is important to enable others to act and to mentor and support others in developing competencies in these areas. One respondent suggested that even more important than conflict resolution is acting on vision and being able to help those engaged see collective as well as individual gain, and to negotiate shared interest (e.g., Harvard's *Getting to Yes* and, more recently, *Getting to Maybe*) (Respondent 7).

Figure 4-4 shows the average scores across the five relational aspects of leadership.

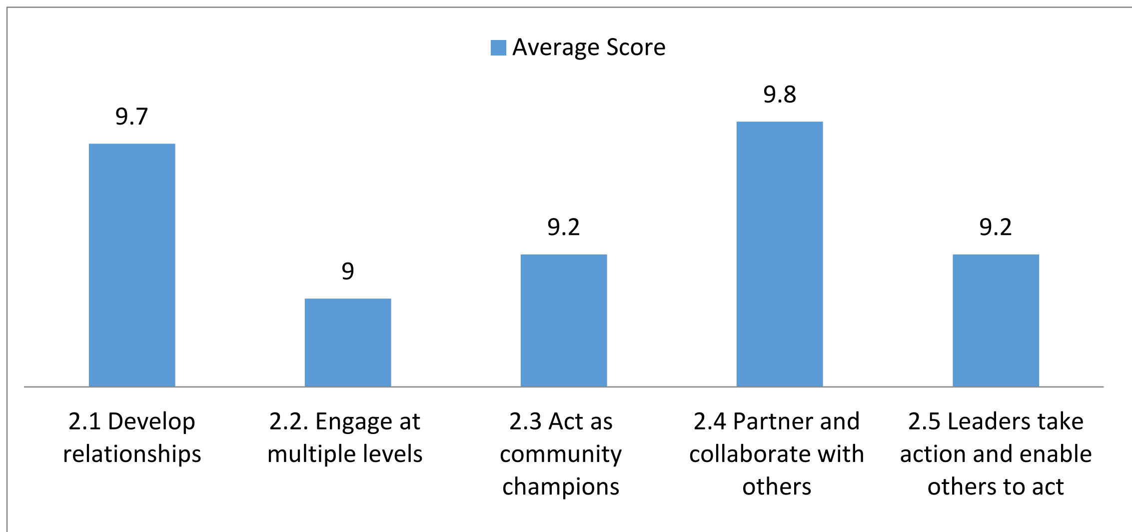


***Figure 4-4*. Average agreement scores for relational aspects of leadership**

Knowledge of the leader

Three types of knowledge, contextual, clinical, and situational, needed by leaders were identified in the literature set.

1) Contextual knowledge

In the description provided from the literature set, leaders:

- have knowledge about the community;
- gain knowledge about the community through a community health assessment;
- are highly aware and supportive; and
- raise awareness of issues, engage with the community, and use multiple forms of evidence and knowledge.

The level of agreement on this aspect of leadership for health equity was high, with two (15%) scoring at 8, two (15%) scoring at 9, and nine (69%) scoring it at 10. The average was 9.5. Six respondents provided comments. There was recognition that the community is an essential partner in health equity promotion. Structures, such as community events, consultations, regular meetings and town halls, as well as processes such as community health assessment, are essential for hearing from and working with communities. While important, community health assessment is only one way of gathering information. As well, it must be ongoing; it is not a static thing completed on a certain date. Circumstances change continuously, and so relationships are a crucial source of information. Leaders also have knowledge of interventions, practices, and methods: "all the knowledge needed to make change was a result of a community's assets, needs, opportunities, etc." (Respondent 9).

2) Clinical knowledge

In the description provided from the literature set, leaders who have a clinical background and advanced education are associated with positive differences in community health outcomes. This aspect of leadership elicited a range of responses. Three respondents (23%) scored it at a neutral 5 in terms of their agreement, two (15%) scored at 6, one (8%) scored at 7, and six (46%) scored at 10. The average score was 7.8. Comments (n = 9) ranged from suggesting that some leaders "do not require credentials" to "it can help" and an "essential component." Relevant expertise and a broad range of competencies in public health and health equity are important, as well as the ability to synthesize knowledge and apply it. Several respondents commented that the way this aspect of leadership was worded asked them to validate what was in the literature rather than what they felt.

3) Situational knowledge

In the description provided from the literature set, leaders:

- are organized and effective managers; and
- understand and apply the concepts of cultural competence, health equity, and social and structural determinants of health.

The majority of respondents (n = 8, 62%) concurred with this aspect of leadership and gave it a score of 10, while four (31%) scored it at 9, and one (8%) scored it at 7. The average score was 9.5. Comments (n = 8) recognized a postcolonial lens to Aboriginal issues, and that it is vital to health equity promotion to update the term "cultural competence" as cultural sensitivity and understanding the lived cultural experience of people. There was a suggestion that knowledge of situational analysis methods and skills is a component of this type of leadership knowledge. One respondent suggested that leaders require knowledge in how to consider

relevant aspects of the pathways for the social determinants of health and health equity (i.e., understanding of the social/historical context; societal processes and patterns; social, environmental, and economic conditions; as well as the influence of settings) (Respondent 9). There was also recognition of the need for a broader theoretical foundation than what is offered in the description.

Figure 4-5 reflects the average scores across the three types of knowledge leaders need.

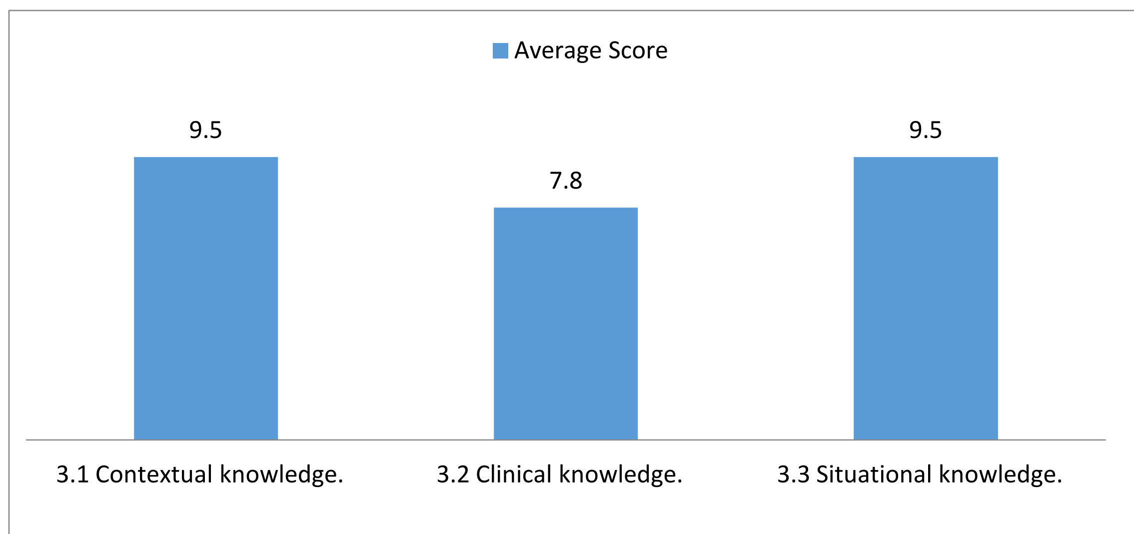


***Figure 4-5*. Average agreement scores for leadership knowledge**

The survey asked an additional question: *From your perspective, are there any other aspects of leadership to advance health equity that were not covered?*

Eight (62%) responded *no* and five (38%) responded *yes*, with eight respondents providing a comment. Intuition, personality, community development principles, empowerment, and critical social theory were brought forth as critical to be a change agent or leader to address health equity issues. The challenge of advancing health equity in an environment of constraint was raised, as well as the recognition that the leader is only as good as the staff she or he is

working with. Essential to this endeavour is the ability to attract high quality staff to work in this area, and to be able to support and encourage them in the hard work. The ways in which leaders engage internally within their organizations reflects values of social justice and inclusion. The best leaders just “know” or “sense” what is the next step or what might work. It may not be based on measures or knowledge but a keen sense of awareness and willingness to be a risk taker. One respondent commented that this is an ideal vision of leadership and queried how do we foster this level of excellence in the context of cultural, organizational, systemic, or financial constraints?

4.6.2 Tools, strategies, and mechanisms to support or develop public health leadership

Eight categories of tools, strategies, and mechanisms were described in the literature set, and respondents were asked to indicate their level of agreement with each in terms of its ability to support and/or develop leaders to advance health equity.

1) Policy and program development, implementation and evaluation

Six respondents (46%) scored this tool, strategy, or mechanism at 10 (*totally agree*). Four respondents (31%) scored at 9, three (23%) at 8. The average score was 9.2. Comments (n = 8) included a strong emphasis on the potential role of policy in providing a flexible structure, being a lever to facilitate change, supporting practice, and being able to lead to concrete action. Discussion of implementation also led to evaluation and the importance of both bringing a critical social lens to the process and engaging front-level workers in decisions, implementation, and evaluation (Respondent 10). The challenge is that effective social determinants of health and health equity leaders need to think bigger and add additional upstream programs. Policy captures a lot of what is required, “we talk about policies, programs, practices AND structures”

(Respondent 9). A leader must be able to influence all of these components. One respondent noted that ideas by themselves only go so far, it is having knowledge of concrete actions that can be taken to make an impact that the leader will be asked for, so it is important to be knowledgeable in this area as well. One respondent suggested adding evaluation to this strategy.

2) Accreditation, quality improvement, and evaluation

The responses to these processes included one (8%) at 6, one (8%) at 7 (8%), four (31%) at 8, one (8%) at 9, and six respondents (45%) scored it at 10 or total agreement. The average score was 8.8. Comments (n = 7) reflect a value for quality improvement and evaluation processes but some ambivalence toward "accreditation" per se. There was concern that accreditation and credentials narrow the scope and variety of background, experience, and training that come into a field, and that this, in turn, narrows innovation and creative problem solving. One respondent suggested it would be helpful to say accreditation, quality improvement, and evaluation "of what and by whom" (Respondent 8). Staff and community involvement and applying an equity lens to population health and priority populations are seen as areas for growth. One respondent noted that in public health the "outcomes are often longer term in nature, so need to ensure that appropriate and complete data are monitored to determine outcomes, gaps, redundancies, etc." (Respondent 7).

3) Workforce and practice development

There was a range of response to these strategies. One respondent (8%) scored it at 5 or neutral, two (15%) scored at 7, two (15%) scored at 9, and eight (62%) scored at 10 (*totally agree*). The average score was 9. Comments were made by 77% of the respondents (n = 10). While several questioned whether this was a leadership role, others emphasized that for public health to embrace the social determinants of health and health equity, and address the issues in

ways that create real and sustainable change, “workforce and practice development are at the core because we must untrain and retrain our workforce” (Respondent 9). One respondent suggested linking this strategy to best practices in knowledge translation and using adult learning principles as well as interactive and facilitative development processes. Several respondents commented that this is an emerging and changing area of practice for public health, and there is a need to ensure that the workforce in general is given the opportunity to be engaged and gain competencies necessary to step into leadership roles wherever they are in an organization. “Leaders for health equity support others in their social and work networks to share knowledge and practice changes” (Respondent 6). “For any ideas to be scaled up, they need to be coupled with workforce development” (Respondent 12).

4) ***Processes, structures, and service delivery models that support collaboration, partnership, and engagement with communities and other sectors***

There was strong agreement with this statement. Nine respondents (69%) totally agreed and scored it at 10, and three (23%) scored it at 9. One respondent did not provide a score. The average score was 9.8. Structures are required to help bridge the different approaches of government, non-government, and community sectors. Respondents identified that these models must have the public, clients, communities, and/or families at the centre and driving the service delivery model (Respondent 7). Effective policies and practices to deal with ethical dilemmas, including relational ethics and power imbalance, must be in place and used (Respondent 10). The range and breadth of issues require us to work in partnership with people who trust each other. Teams must be interprofessional and functioning, and include communities and other sectors.

5) Access to and sharing of evidence, research, and information about the community and/or population

There was a range of responses to this statement. Ten of the respondents (62%) scored it at 10 (*totally agree*). Three (23%) scored it at 9, and one (8%) respondent each scored it at 7 and 8. The average score was 9.4. As many partners do not have this capacity, the gap reflects an important role for health to play. Several respondents stressed that this work must be done with the community and using best evidence. “Shared data and research capacity between the various groups involved is critical” (Respondent 12). “Health equity promotion often starts with the data (e.g., community health assessments) and advances with community knowledge (e.g., qualitative understanding of the observed situation)” (Respondent 6). Recognition of the multiple types of data, information, and evidence, and their respective importance is critical, as is the ability to analyze it collaboratively.

6) Conceptual and theoretical frameworks that guide decision making and action

Only 39% of the respondents (n = 5) totally agreed with this statement. It was scored at 7, 8, and 9 by two respondents (15%) respectively; one respondent (8%) scored it at 6; and one (8%) at 5 (neutral). The average score was 8.4. Ten of the respondents provided comments. Several cautioned that good frameworks for health equity work were just emerging and that our experience in using them is limited. Some cited advantages of using frameworks to contribute to comprehensiveness of approaches (e.g., in areas of assessment), to “sense-make,” and to guide actions and decision making. Theoretical and conceptual frameworks would be helpful, especially “those that can work at the intersection of theory and practice, with frequent testing and re-testing for refinement of the concepts, theories and understanding of action” (Respondent 9). Several suggested that knowledge of the frameworks that are available is useful, but a blend

of multiple approaches is usually what leads to action. Frameworks need to be in everyday language, clear and specific, yet malleable in light of changing information and perspectives. One respondent said "I cannot think of a single one framework or approach – there is not a silver bullet for health equity promotion" (Respondent 6).

7) Community-based participatory research as a strategy for capacity building

This statement elicited a range of responses. Six respondents (46%) scored it at 10 (*totally agree*). Three (32%) scored it at 8, one (8%) scored it at 7, one (8%) scored it 6, and two (15%) scored it with a 5 (neutral). The average score was 8.2. There were nine comments provided. Several respondents suggested that this be included as a strategy to promote collaboration (above) and ensure that other methods such as Appreciative Inquiry are added. Respondents cautioned that collaboration with the community is essential and may not need research to accomplish that. Skill in this strategy may not be available at the undergraduate level so would not necessarily be in the "toolkits" of many public health practitioners.

8) Active discussion and discourse about values, ideology, and politics

There was a range of responses to this statement with 54% (n = 7) totally agreeing. One respondent (8%) scored it at 9, two (15%) at 8, and one respondent (8%) each scored it at 7, 6, and 5. The average score was 9. Seven respondents provided comments. Several respondents cautioned that, although potentially helpful, this strategy needed to involve others, be evidence informed, and lead to real action. Leaders require the skills to help colleagues, frontline practitioners, other leaders (managing up and down), and a diverse range of stakeholders to work through an understanding of how values align with practice (Respondent 9). Using evidence-informed approaches that encourage people to be open as to their biases facilitates progress

regardless of ideological differences (Respondent 12). Support for discussion and discourse about political activity may be different from politics (Respondent 7).

One respondent saw this strategy aligning with attributes of the leader identified earlier (i.e., visionary, effective communicator, involved in relationships with multiple sectors and community groups) (Respondent 6). Several suggested that using reflective practice could help to avoid discussion going in directions that can derail programs and policies. “Leaders for health equity require the ability to facilitate, guide, encourage, and influence such reflection” (Respondent 9). Strategies such as open space technology can support meaningful discussions across sectors and communities, and shift understanding of how terminology, words, images, and stories can shape and redirect discourses (like the work of the organization *Upstream*) (Respondent 6).

Figure 4-6 reflects the average scores for the different categories of tools, strategies, and mechanisms to advance health equity.

The survey also asked respondents: *Are there any other tools, strategies, or mechanisms you use to support or develop public health leadership to address the social determinants of health and advance health equity?*

Sixty-nine percent of the respondents (n = 9) answered *no* to this question. Four respondents provided comments, including this important question:

> I'm hoping that your research can contribute to understanding what is different, what stands out, for SDH/HE [social determinants of health/health equity] leadership as opposed to good leadership in general. Of course, impactful policies are essential. Of course, quality improvement is critical. Of course, workforce development is required. But are these required more or differently for SDH/HE

and for public health as a whole? (Or any other organization/entity, for that matter.)

Suggestions provided by respondents included:

- Project or program steering committees that include the population of focus, for example, including teens when planning a school-based teen clinic or new Canadians on a committee looking to address refugee health.
- Discourse methods, individual discussion and focus groups, surveys to engage others.
- Tools such as performance appraisal and evaluation and organizational readiness tools.
- A repository of effective program and policy interventions and other effective tools and approaches that is easily searchable and accessible.
- System change and complexity understanding.
- Essential to explicitly include the necessity for SDH/HE leaders to think and influence big and upstream.
- Lack of equivalent stature, value, and rigour vis-a-vis SDH/HE compared to what is understood as clinical, for example, respected expectations/standards in assessing qualitative data compared to quantitative data.

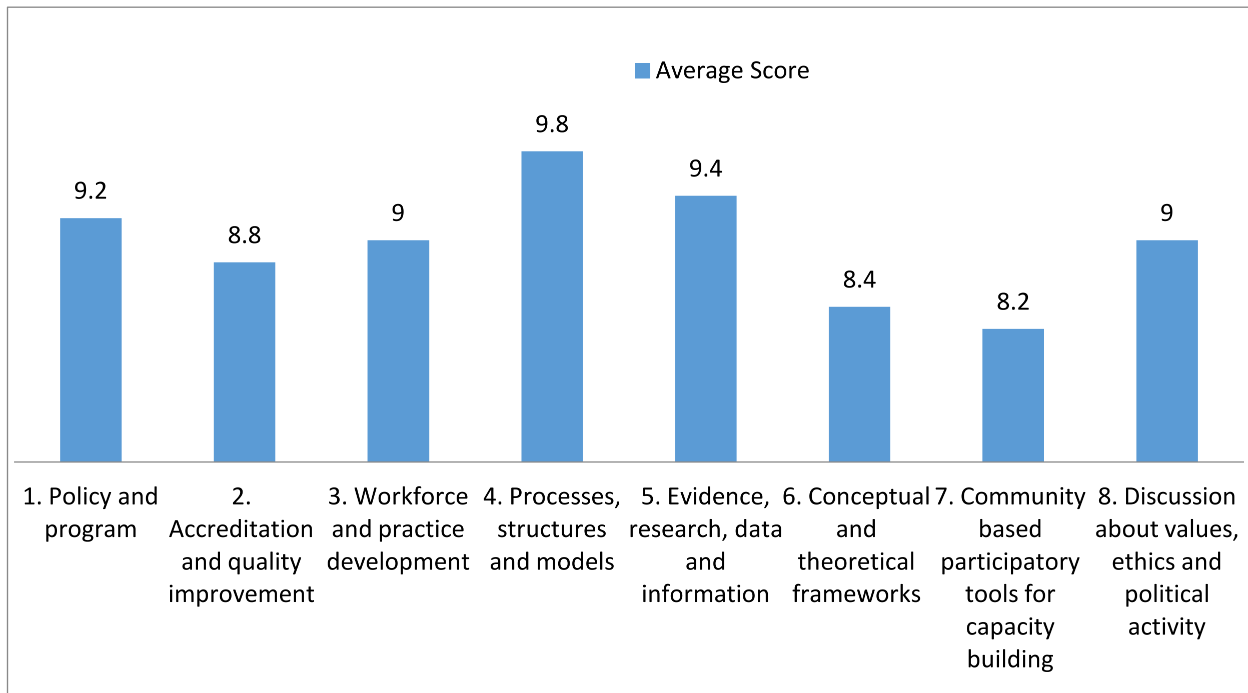


***Figure 4-6*. Average agreement scores for tools, strategies, and mechanisms**

4.7 Findings from the Metasummary

A qualitative synthesis was undertaken for a deeper interpretation of the findings of the scoping review and descriptions of leadership in the literature set. Two further research questions regarding leadership emerged to guide the qualitative synthesis: (1) How is leadership (and leaders) described in the literature set at an individual, organizational, community, and system level? and (2) What is the relationship between leadership and the outcomes? A metasummary process was used to summarize the main results of each included study and perform a thematic analysis.

A total of 510 data elements were extracted from the 27 included studies. The majority of the data elements were verbatim extracts from the studies. Where the extracts were lengthy, the researcher paraphrased. The number of data elements contributed by each study ranged from five

to 40 (1-8%). Figure 4-7 shows the distribution of the data elements extracted from each of the included studies. The average number of data elements contributed by each study was 19 with a median of 17.

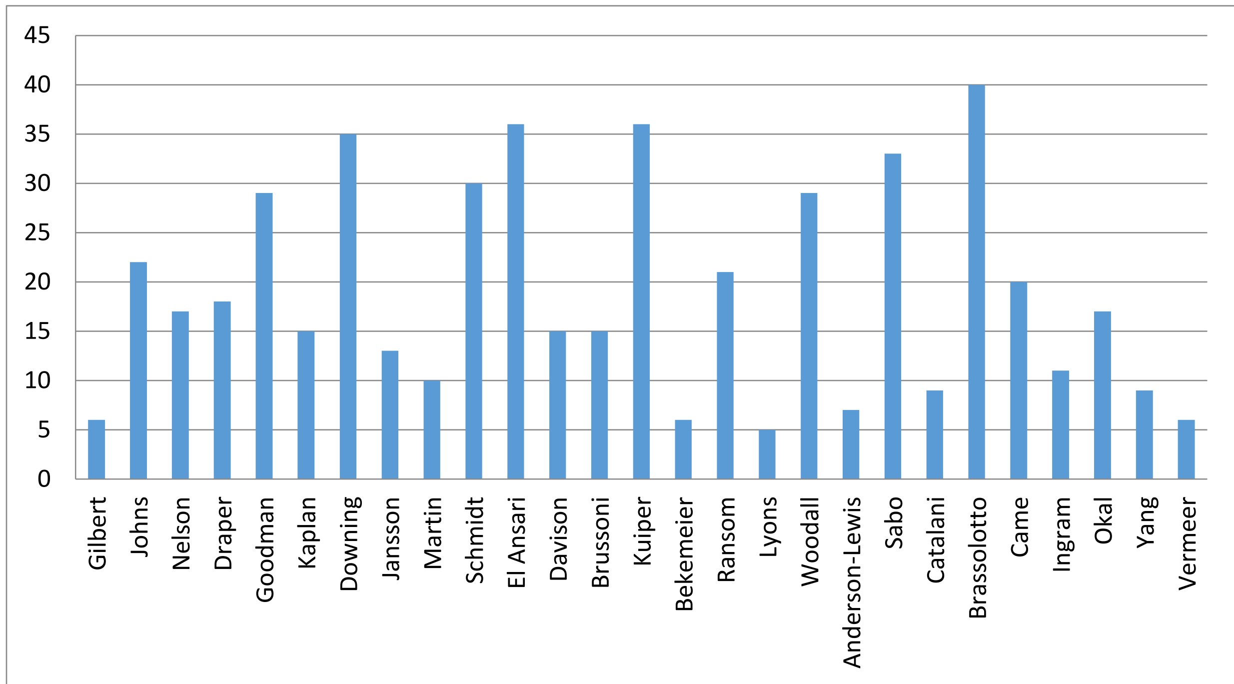


***Figure 4-7*. Number of data elements extracted from the included studies**

Four of the studies (15%) contributed 35 or more data elements each, contributing a total of 147 of the 510 data elements (29%). Each of the four studies used different research methods: case study (Downing et al., 2005), qualitative research method (Brassolotto et al., 2014), program evaluation (El Ansari et al., 2009), and mixed quantitative/qualitative methods (Kuiper et al., 2012). Another five studies (19%) contributed seven or fewer data elements each, for a total of 30 of the 510 data elements (6%). These five studies also used different research methods: case study (Gilbert et al., 2010), qualitative (Vermeer et al., 2015), quantitative (Bekemeier, et al., 2012), and mixed quantitative/qualitative methods (Lyons et al., 2013; Anderson-Lewis et al., 2012).

All the data elements were transcribed into a spreadsheet, then the text was extracted and a word cloud made using Tagxedo™ based on relative word count. Figure 4-8 is the word cloud containing the 5,353 words from the 510 data elements. The most frequent word counts were for the words community, health, leadership, and leaders. The next 16 most frequently counted words cluster into: **what** was done (policy, program, processes, project, work); **how** it was done (political, support, advocacy, action, activities, building, involved, use); **where** it happened (local, social); and **why** (disparities).

Figure 4-8. **Word cloud for 510 data elements from the included studies**

The concept of leadership as bridging or enabling emerged early in the analysis, as did the observation that leadership occurred at multiple levels (individual, organization, community, and system). These concepts are broken down further below, along with values, based on the 510 data elements.

4.7.1 Individual level

At the individual level, leadership includes practitioners and community leaders. Of the 510 data elements, 147 (29%) were coded at this level. These 147 data elements were extracted from 24 of the 27 studies (89%). The text (1,471 words) was imported into Tagxedo™. The most frequently counted words (community, health, leadership, leaders, and level) were removed from the list, and a word cloud was made from the remaining words (Figure 4-9). The next most frequently counted words (15) cluster into:

who	staff, members, champions
what	skills, confidence, role, work
how	support, partnerships, implementation, development, engaged, involved
where	local
why	committed

Figure 4-9. **Word cloud for individual level in the included studies (147 data elements)**

From the words most often used in the data elements, the following description of leadership at the individual level is proposed as a beginning description of public health leadership to advance health equity:

> *At the individual level, leaders are staff, members of the community, and champions. Their skills and confidence are enacted through their roles and practice (work). They lead by providing support, establishing partnerships, being engaged and involved, and supporting the development and implementation of services, programs, and policies. Their work occurs locally and is fueled by their commitment.*

4.7.2 Organizational level

At the organizational level were 106 of the 510 data elements (21%). These were extracted from 23 of the 27 studies (85%). The text (1,735 words) was imported into Tagxedo™. The most frequently counted words (community, health, leadership, leaders, and level) were removed, and a word cloud was made from the remaining words (Figure 4-10). The next most frequently counted words (16) cluster into:

who	
what	work, project, policy, program
how	organized, advocacy, support, training, education, structure, processes
where	organization, public
why	SDH [social determinants of health], racism, success

Figure 4-10. **Word cloud for organizational level in the included studies (106 data elements)**

From the words most often used in the data elements, the following description of leadership at the organizational level is proposed as a beginning description of public health leadership to advance health equity:

> *The organization supports leadership through its work, including projects, programs, and policies. The structures and processes of a public health organization support the community as well as their employees. The organization provides support and advocacy on important health issues. The organization provides training and education within the organization and with community partners. The organization works to be successful and address the social determinants of health, including racism.*

4.7.3 Community and system level

At the community and system level were 122 of the 510 data elements (24%). These were extracted from 26 of the 27 studies (96%). The text (1,370 words) was imported into Tagxedo™. The most frequently counted words (community, health, leadership, leaders, and level) were

removed. A word cloud was made from the remaining words (Figure 4-11). The next most frequently counted words (16) cluster into:

who	
what	capacity, policy
how	political, activity, coalitions, build, involvement, support
where	context, social, local
why	evidence, disparities, important, change, increased

***Figure 4-11*. Word cloud for community and system level in the included studies (122 data elements)**

From the words most often used in the data elements, the following description of leadership at the community and larger system level is proposed as a beginning description of public health leadership to advance health equity:

At the community and system level, leaders (and partners) build coalitions, engage in political activity, are involved, and provide support. Capacity building and policy are tools and resources used at this level. Interventions and leadership action occur at a

societal and local level, again reinforcing that context matters. At these levels, evidence, change, and disparities inform actions of the leaders.

4.7.4 Bridging and enabling

A theme that emerged early was one of leaders playing a bridging and enabling role. This theme included 95 of the 510 data elements (19%). These were extracted from 21 of the 27 studies (78%). The text (1,957 words) was imported into Tagxedo™. The most frequently counted words (community, health, leadership, leaders, and level) were removed. A word cloud was made from the remaining words (Figure 4-12). The next most frequently counted words (16) cluster into:

who	
what	policy, project
How	participation, collaboration, structure, engagement, partner, processes, support, action, building, used, political, advocacy
where	local
why	disparities

Figure 4-12. **Word cloud for bridging/enabling in the included studies (95 data elements)**

From the most frequently counted words in the data elements extracted from the included studies, the following description of the bridging and enabling aspect of public health leadership to advance health equity is offered:

> *Participating, collaborating, engaging, and partnering are processes that facilitate the bridging and enabling dimension of public health leadership. Through structures and processes, action is taken and support is provided. Participating in political advocacy as well as building capacity strengthen the leader's ability to enable others, with leaders working most consistently at a local level to address disparities.*

Bridging and enabling are bi- or multidirectional descriptions of relationships, partnerships, and collaborations. Examples of enabling leadership include addressing incoherence between national and local levels that hinder policy implementation, linking issues that already have political priority, building bridges between communities to foster cross-cultural integration, and aligning leadership capacity with community readiness.

4.7.5 Values

Another theme that emerged early related to the values that underpin or inform public health leadership to advance health equity. There were fewer data elements in this theme: 40 of the 510 data elements (8%) that were extracted from 12 of the 27 studies (44%). The text (518 words) was imported into Tagxedo™ to make a word cloud (Figure 4-13). The most frequently counted words include:

who	members, politician, leaders
what	health, issue, program
how	barrier, action, linking
where	social, community
why	ethos, SDH [social determinants of health], values, beliefs, marginalized, ideology, disparities, justice, personal

Figure 4-13. **Word cloud for values in the included studies (40 data elements)**

From the most frequently counted words in the data elements extracted from the included studies, the following description of the values that underpin public health leadership to advance health equity is offered:

> *Community members, leaders, and politicians work from personal values, beliefs, ethos, and ideology. Justice and the importance of reflection on the social determinants of health, disparities, and marginalization figure strongly in public health leadership. These values play out in society and in the community, informing how health and health issues are addressed as well as programs are developed.*

The following chapter will discuss the implications of the findings from the scoping review and metasummary, the research methods used, and considerations for future research to strengthen public health leadership to advance health equity.

CHAPTER 5 – Discussion

In this chapter, the findings of the scoping review and metasummary will be discussed in the following sections: (1) research questions, design, and theoretical frameworks; (2) aspects and description of public health leadership to advance health equity; (3) tools, strategies, and mechanisms to support or develop public health leadership; and (4) recommendations for further research. Limitations of the scoping review and the method are discussed in section 5.5. The final section presents the conclusion and considerations for practice, theory, policy, research, and education to develop and support public health leadership to advance health equity.

5.1 Research Questions, Design and Theoretical Frameworks

A few general remarks on the 27 studies included in this scoping review are provided to clarify the range and scope of the studies. The articles reflect a relatively current evidence base (most were published between 2009 and 2014), perhaps reflecting a beginning or growing interest in the social determinants of health and health equity as an area of inquiry. The studies included in this scoping review were difficult to locate primarily due to inconsistent keywords and breadth of publication sites. The difficulty locating relevant research studies and the limited number reflect an evolving understanding and use of the terms *equity*, *disparity*, *inequality*, and *social determinants of health*. The WHO's (2008b) *Commission on Social Determinants of Health Final Report* presented a compelling evidence base and thus argument as to the importance of the social determinants of health and the imperative for global action from a social justice perspective. Building common agreement on language in this area is critical, with terms that are understandable by the public and communities as well as across sectors, disciplines, and jurisdictions (Raphael, 2016).

Health equity (variably referred to as inequity, inequality, or disparity) was a consideration in either the research question (aim or purpose) or in the study design for all of the included studies in this scoping review. However, the concept itself is not described or defined in about a quarter of the included studies. When described, a difference in the determinants of health (52%) and/or unfair or avoidable health differences (44%) were the most frequent descriptions.

Analysis of the distribution of publication sources and interdisciplinarity of the studies included are important attributes in a scoping review. In the current scoping review, the 27 included studies were published in 22 journals. Only four were published in the same journal (*Journal of Public Health Management & Practice)*. This dispersion contributes to the difficulty in finding relevant research evidence to support public health leadership to advance health equity. Six of the included studies were part of larger studies or programs of research. Publications related to other parts of the research programs or projects were not located, perhaps in part due to challenges experienced in locating them or their non-published status. The wide dispersion and relative "hiddenness" of the included studies reflect a lack of cohesiveness and comprehensiveness in the body of literature and resultant evidence base available to decision makers and leaders.

As public health leadership to advance heath equity is influenced by and embedded in the political contexts, societal values, and language used, geographical delineation is important. Although reflecting an international scope with included articles from 10 countries, nearly half of the research studies included in this review took place in the United States. Hence, the results and extrapolations from the scoping review must be carefully considered in this context.

Public health is most often the responsibility of governments or government-funded organizations and agencies. These organizations have responsibility at a country, state, province or territory, as well as regional, community, and health unit levels. The setting or scope of 22% of the included studies was at a national or country level, while 41% were at a regional level, which, for the purposes of the scoping review, included those considering a provincial, state, or health authority perspective in their investigation. Public health leadership occurs at all of these system levels, and while the tools and strategies used are similar, they are often tailored to the level at which they are to be used. Given this variability, using a systems and complexity perspective is suited to the multilevel, multisystem responsibility of public health.

The research questions guiding the 27 studies were generally descriptive and exploratory in nature. The intent expressed in the research questions and purpose was predominantly to "explore," "examine," "understand," and "identify." This reflects an emerging body of work in terms of public health, health equity, and leadership. This finding is similar to that of Vogel and Masal (2015) who, in their review of research on public service leadership, found a topical research evidence base that is very much in its infancy. Tirilis et al. (2011) identified an evidence gap related to social determinants of health interventions and found a limited amount of review evidence evaluating the effectiveness of interventions on the determinants.

Most literature describing public health leadership is theoretical in nature and minimally describes public health leadership specific to advance health equity (Begun & Malcolm, 2014; Koh & Nowinski, 2010; Rowitz, 2014). Leadership or public health leadership was the focus of only a few of the included studies in this scoping review, whereas leadership emerged as a finding or was described as an enabler or facilitator of the outcomes in the remaining studies. Similarly, while Chapman and colleagues (2016) found a growing number of empirical studies in

their review of public service leadership, they also reflected on the diversity of methods and reporting of findings, making synthesis a challenge. Research with a specific focus on public health leadership is required to guide public health leadership practice, education, and policy in the future.

The research designs are consistent with an area where the evidence base is emerging, and more than half of the studies used a qualitative research method, with a high proportion of these using case study and community-based participatory research methods. This reflects the topic's link to community and the complexities of health inequities.

One in five of the included studies were program evaluations, again reflecting the contextually driven and innovative nature of the projects. This finding highlights the contributions to the evidence base from conducting and publishing program evaluations, which is cited as a promising practice for advancing health equity (Sudbury & District Health Unit [SDHU], 2011).

Similarly, one in five studies used mixed research methods, reflecting the need to "provide further insight into how and under what conditions public health interventions work" (Edwards & Di Ruggiero, 2011, p. 44). The mixed methods approaches align with the interdisciplinary, intersectoral, and 360° approaches needed in this complex topic. Garthwaite, Smith, Bambra, and Pearce (2015) suggested the use of mixed research methods and methodological innovation to strengthen understanding of policy change to address health inequalities. However, they also found a lack of consensus regarding precise suggestions for these innovations.

The use of a theory or framework was an area of interest in this scoping review, as theory can assist a decision maker, practitioner, or researcher to explain what they see and experience,

inform their actions or decisions, and predict outcomes. Given the complexity of this field of inquiry, it was imperative for this scoping review to explore theories or frameworks that were used. Twenty-eight distinct theories or frameworks appeared in 21 of the included studies (78%) and served to guide the study, frame the analysis, or were an output of the project. This finding reflects an interest in theory and frameworks but no consensus was made apparent as to preferred or focused approaches to theory. Development of theory to guide public health practice and leadership is important as, while public health is practical and service oriented, it is also philosophical, especially in terms of its lens or way of thinking about and addressing issues that affect the health of populations (Butler-Jones, 2008; Last, 2007).

Similarly, in terms of theory application, Chapman and colleagues (2016) found a large number of distinct theories used to frame public service leadership. This scoping review revealed the lack of consensus in theoretical application to public health leadership, potentially relating to the interdisciplinary, intersectoral roots of the field and resulting in a complexity that will require significant attention and untangling in the future.

Each included study described an intervention, an intervention group, and an outcome. Nearly half of the studies examined a program or service change as the intervention. A clear emphasis emerged on actions on the determinants of health, policy or policy advocacy, community engagement, and intersectoral collaboration. All of these actions or interventions have been identified as promising practices to advance health and social equity (SDHU, 2011). Effective public health leaders work with partners and sectors to create an environment where shared goals are set and collective action can occur (Gardner, 1990).

Intersectoral collaboration and policy change were the most frequently reported outcomes, with nearly three quarters of all outcomes reported occurring at the community and

organizational levels compared to the individual level. This profile of interventions and outcomes reflects the field of public health, where work in the community is often in the form of service or program delivery as well as policy development, and where the intervention group ranges from individuals, families, groups, neighbourhoods, and communities to society as a whole.

Another theme that emerged in the scoping review is that intersectoral collaboration is a complex process and requires intention and commitment to be effective. Minimal research evidence exists to inform this promising practice of multilevel and multisectoral efforts to advance health equity (Ndumbe-Eyoh & Moffatt, 2013; SDHU, 2011), despite this way of working being consistent with recommendations for addressing health inequities (Rowitz, 2013). Complexity theory has been recommended to identify and tap into this network of interaction and interconnection to build social capital (Begun & Malcolm, 2014) and would focus the development of a theoretical approach moving forward. These findings support the widely used definition of public health as an "organized activity of society to promote, protect, improve, and when necessary, restore the health of individuals, specified groups, or the entire population" (Last, 2007, p. 306), requiring collective action by society, interdisciplinary teams, and effective partnerships with all levels of government.

5.2 Aspects and Description of Public Health Leadership to Advance Health Equity

These findings are discussed in two subsections. The first describes the aspects of leadership found in the literature set and validated with senior public health leaders. The second subsection provides a more in-depth discussion of how leadership to advance health equity is described in the literature set, which was derived through the metasummary process.

5.2.1 Aspects of leadership

Aspects of leadership described in the literature set fall into three major categories: attributes of the leader (24 studies), relational aspects (22 studies), and knowledge (13 studies). Each category is briefly discussed.

Attributes of leaders

The six leader attributes below were identified in the scoping review and revised through the validation process with senior Canadian public health leaders who participated in the online validation survey.

Public health leaders are:

1) Visionary, passionate, charismatic, able to inspire, and motivated to be involved

This attribute entails a commitment to enabling others, championing innovation, and using political savvy and advocacy to create space for change and empowerment to occur.

Being forward-thinking sets leaders apart and fulfills the expectation that leaders have a vision and are able to articulate the vision and the path forward (Kouzes & Posner, 2012). Survey respondents validated that being "committed to seeing [a] vision through over time" is essential to effective public health leadership. Fostering effective followership is important, and one respondent noted that it is important for the leader to "enable staff who may want to work on a specific strategy to be given the legitimacy to spend their time there, and encourage their innovation and productivity." Public health leadership requires "supportive mentors" and the courage to take risks, battle, or go against the status quo, in particular to "battle the status quo of classism, racism and oppression". Competency models for the public health workforce include charisma, a characteristic of transformational leadership (Carlton et al., 2015b; CHNC, 2015). This attribute is consistent with what Fried et al. (2012) described, in that public health

leadership requires a vision of accomplishing health for populations as a "platform of science, evidence, experience, matching solutions to needs, shared knowledge and a commitment to equity – translated into practice" (p. S7).

2) Connected to the community

This attribute highlights the embeddedness, engagement, and deep linkages the leader has to the community, as well as understanding of and respect for its identity, heritage, and preferred futures.

Community involvement was a strong theme in the included studies and received strong agreement from the survey respondents. Public health leaders' involvement with communities that have been disadvantaged by policies is essential to effect positive change in inequities. Skills and knowledge in political action as well as policy development, implementation, and evaluation were considered essential for public health leadership. Policy is an appropriate lever and leveler to use to advance health equity when society is considered the client. While this connection to the community is central to public health practice and leadership historically, some respondents commented that it is less and less supported in the current environment. Organizational culture, policy, and processes can support or act as a barrier (perceived or otherwise) to public health leadership. Baum (2007) suggested using the nutcracker effect with top–down and bottom–up action to redress or "crack the nut" of inequities. Baum described top–down pressure from governments and the use of policy, coupled with bottom–up pressure from members of communities and civil society. Public health leadership can influence and strengthen both of these levers. Strong and effective leadership will motivate and inspire public health practitioners and leaders in communities and neighbourhoods to exert pressure or squeeze around the middle of the "nut" of inequities.

3) Effective communicator

Clear, multidirectional, open, and transparent communication is necessary for effective leadership.

Effective ways for public health leaders to communicate include active listening; reading non-verbal cues; and articulating vision, goals, ideas, or beliefs to motivate or galvanize others to action. Messages must be tailored to specific audiences, use current forms of communication, and be respectful in both messaging and issues of disagreement. In other words, as one respondent said, leaders need to be able to "pitch the message at the right level for the audience they are primarily trying to reach at a given event, and read that audience on the fly to gauge whether they are being reached." Consistent with the findings of the scoping review, social marketing was identified by the SDHU (2011) as a promising practice to create positive social change and improve the health of vulnerable populations. The authors suggested considering two aspects of social marketing: tailor messages to more disadvantaged populations and use social marketing to "change the understanding and ultimate behaviour of decision makers and the public to take or support action to improve the social determinants of health inequities" (p. 2).

4) Trusted, respected, and credible

Effective leaders foster trust throughout and across organizations while legitimizing and facilitating community and professional partnering and collaboration.

This attribute is reflected in involvement of community members and development of trust in hard-to-reach communities. Kouzes and Posner (2012) identified credibility as a foundation of effective leadership. This attribute is strongly linked to the other attributes. One respondent noted that "part of trust involves knowing when to speak out and when to stay more silent, so that you are listened to when you choose to speak out."

Having access to and using reliable data, evidence, and community knowledge was emphasized by multiple respondents and was tied to the ability to inspire. Rowitz (2014) suggested being able to identify, analyze, and interpret data and information as an essential and unique attribute of public health leadership. The public health leaders who participated in a study carried out by the NCCDH (2013) identified providing high quality data and evidence as a public health leadership action to address an issue such as poverty or homelessness. The importance of action, intentionality, and relationships with community members was stressed in both the scoping review and validation phase.

5) Orientated to values of social justice and solidarity

An ethos of justice, fairness, and shared values is essential to this attribute in order to work for positive change with the community.

While respondents concurred with this attribute, and social justice is a core value for public health practice in Canada (PHAC, 2008), one respondent stated that it is not the value but the action and effort of "figuring out how to put social justice into practice [that] is essential to health equity promotion." Given that health inequities are considered to be health differences that, by reasonable means, could be avoided and thus unfair (Marmot, 2013; Marmot et al., 2008), for action to occur, there is first a judgement that must be made from a set of values held by those in leadership positions.

Another respondent spoke of these values as the basis for "striving for social justice and fairness, in a time of limited resources." Respondents noted that this attribute may be ideal but not always present in practice or in the organizations or the systems in which they work and live. The ways in which leaders engage within their organizations reflect their values of social justice and inclusion. The values and culture of public health organizations influence the practice of its

members (Annett, 2009; Cohen et al., 2013; Dickson, 2007). Social justice and equity are core values of the public health sector making it well suited to provide leadership to address health inequities (Cohen et al., 2013). These values, when present, inform the way public health organizations enter into relationships with communities, how goals and priorities are set, and how the organization conducts its work. Consistent with this finding, the literature supports the view that the stronger the value system in an organization, the greater level of empowerment is experienced by its leaders to put those values into action (Cohen et al., 2013).

6) Humble, caring, and patient

This attribute articulates leaders' selfless and unconditionally caring presence within the organization and community.

Although the respondents tended to see these qualities as essential for leaders to commit to this long-term work, some recognized the contradictory reaction when these elements are perceived as weaknesses. One respondent said that "effective leaders realize that they need to take the long view and take advantage of opportunities when they present themselves, and not force the issue all the time." However, it was recognized that complex environments bring difficulties, and, in the words of Kouzes and Posner (2010), such "leadership is an affair of the heart" (p. 135). Without sincerity, passion, and compassion—essentially a love that opens space for another viewpoint, idea, race, way of knowing, community decision, and so forth (Maturana & Varela, 1987)—the leader will not be able to find the courage or the stamina to sustain. Social justice is a manifestation of our caring (love) for the community and its members (Falk-Rafael, 2005).

Relational aspects

The following five relational aspects of leadership to advance health equity were found in 81% of the studies and received high agreement from respondents in the online survey (with basic revisions based on their feedback):

1) *Leaders work in partnership and collaboration as appropriate with the community and other organizations and sectors. They build coalitions and "bridges" between communities, leaders, organizations, and other sectors.*
2) *Leaders are skilled at developing relationships and bring relationships with them. They know who to talk to, who to listen to, and are able to reach out.*
3) *Leaders act as community champions and use a participatory approach to encourage and inspire others to lead, engage the community, and build social capital.*
4) *Leaders take action and enable others to act. They provide support and effectively negotiate shared interest and collective vision.*
5) *Leaders engage at political and executive levels along with organizational and community levels to build supportive and empowering relationships and enable others to act.*

The relational aspects of public health leadership are paramount (Rowitz, 2014). Establishing effective relationships is an important public health leadership skill, but so are the relationships that a public health leader brings to a situation (NCCDH, 2013b). Relational leadership theory was described by Uhl-Bein (2006) as "an overarching framework for the study of the relational dynamics that are involved in the generation and functioning of leadership," and it "focuses on the *relational processes* by which leadership is produced and enabled" (p. 667).

Her intention was to move consideration of leadership beyond the traits of the leaders themselves and situate leadership in the complex relational context in which it plays out.

Another theory that may prove helpful for public health leadership is complexity leadership theory, which builds on a leadership paradigm focused on "enabling the learning, creative, and adaptive capacity of complex adaptive systems (CAS) within a context of knowledge-producing organizations" (Uhl-Bein et al., 2007, p. 298). Within this theory, the enabling leadership function has strong appeal for public health and is described as serving to "enable (catalyze) adaptive dynamics and help manage the entanglement between administrative and adaptive leadership (by fostering enabling conditions and managing the innovation-to-organization interface)" (p. 306). In other words, enabling leaders to work in the "in betweens" to bridge or develop useful and real connections between the formal organization and system and the people, communities, partners, and other sectors. This type of leadership requires a high level of leader competence. It is played out in competent organizations and has been described by public health leaders as bridging organizational activity with community action (NCCDH, 2013b). Leadership for substantive and sustainable change is enacted through meaningful involvement of those who are affected as well as engagement of others to envision their role in making the changes (Grossman & Valiga, 2012; Kotter & Schlesinger, 2008). This view of leadership across networks of organizations and sectors has received very little attention in the healthcare leadership literature to date (Taylor, 2012). However, it is an integral aspect of public health leadership.

Knowledge of the leader

Three types of knowledge of leaders were identified in the included studies and revised based on feedback from the survey respondents:

1) *Contextual knowledge* is about knowing the community and its structures, in order to link the community within and beyond its borders. It is this type of knowledge that allows leaders to effectively raise awareness of issues, engage with the community, and use multiple forms of evidence and knowledge. One source of this knowledge comes from ongoing and iterative community health assessment.

The NCCDH (2013b) found that public health leaders use their formal and informal expertise to bring a health equity lens to a situation. This knowledge or expertise facilitates their connection with the communities. Another finding emphasized that public health leaders recognize the importance of community expertise, and they know they have much to learn from communities. Similarly, in terms of public health leadership to advance health equity, Koh and Nowinski (2010) argued that what is required is "leadership—societal, organizational and individual—that embraces the powerful integration of science, practice and policy to create lasting change" (p. S9).

2) *Situational knowledge* is the understanding and application of knowledge related to cultural, socio-economic, historical, structural, environmental, political, and contextual circumstances and processes.

Situational knowledge is related to specific work scenarios, contains explicit properties, and requires prior awareness of an applicable model to resolve the problem at hand (De Jong et al., 1996). This knowledge allows the leader to demonstrate skills, analytical capacities, and applied action on health equity as well as social and structural determinants of health. Situational knowledge important to public health leaders includes the political environment (Begun & Malcolm, 2014; Rowtiz, 2014).

3) *Clinical (practice) knowledge* is specialized knowledge gained through formal means that results in a broad range of competencies in public health and health equity. This type of knowledge is intervention or practice based, and reflects leaders' ability to synthesize knowledge and apply it (i.e., theory to practice).

Much of what is known in public health is expressed through everyday actions—praxis—which refers to behaviour or action that is based on knowledge or values (Chinn & Kramer, 2013). Knowledge refers to "knowing that is expressed in a form that can be shared or communicated with others" (Chinn & Kramer, 2011, p. 2). It is what a discipline collectively considers to be a reasonable and accurate understanding of the world and can be judged by standards and criteria shared by members of a discipline. Public health is an interdisciplinary endeavour and has struggled to identify its common knowledge base. The development of core competencies (PHAC, 2008) has assisted in identifying the knowledge, skills, and attitudes of the individual practitioner. Knowledge, skills, and attitudes required for public health leaders are reflected in the *Leadership Competencies for Public Health Practice in Canada: Leadership Competency Statements* (CHNC, 2015). However, the competencies of public health organizations (which are situated in complex health and social systems) have yet to be defined.

One respondent summed it up as "the best leaders just 'know' or 'sense' what is the next step or what might work. It may not be based on measures or knowledge but a keen sense of awareness and willingness to be a risk taker." However, this type of knowing, although important for public health leadership to advance health equity, does not always have equivalent stature and value when compared to what is understood as more traditional public health "clinical," "technical," or scientific knowledge. However, to be effective, public health leaders

and their organizations will need to add experiential knowledge, emancipatory knowing, and political advocacy (Falk-Rafael & Betker, 2012a) to the more traditional knowledge and skills.

5.2.2 Description of leadership

Public health practitioners work in diverse settings and places such as health units, government offices, community health or health access centres, schools, daycares, homes, prisons, parishes, workplaces, recreational facilities, and on the streets. Their presence in communities makes them ideal leaders to guide health system change, to give voice to the public's issues and concerns as well as the real world impact of public policy, and to advocate for systemic and societal solutions and change. Public health has the potential to optimize population health outcomes, improve prevention of disease and injury, and thereby contribute to the sustainability of the health care system (CPHA, 2010). However, consensus on what constitutes public health leadership is all but absent in the research literature. Given this dearth, and the rich responses from the online survey respondents, a further phase, metasummary was undertaken. The metatsummary allowed an in-depth examination of the descriptions of leadership, and was undertaken after all six phases of the scoping review were complete. The findings of the metasummary were not validated with public health leaders.

Individual, organizational, and community/system levels

In Phase 7 of the scoping review framework (i.e., metasummary), descriptions of leadership at multiple levels emerged in the early stages of the thematic analysis. Of the 510 data elements, 147 (29%) were related to the individual leader level, 106 (21%) to the organizational level, and 122 (24%) to the community or system level. A large percentage of the studies described leadership at the system or community level (96% (26/27), with 88.5% (24/27) of the studies describing leadership at an individual level and 85% (23/27) at the organizational level.

These findings contrast with those of the review conducted by Chapman et al. (2016) of public service leadership literature in which the individual leader was most often the unit of analysis

The following descriptions of public health leadership at each level are derived from the words most often used in the data elements. They are proposed as descriptions of public health leadership to advance health equity at an individual, organizational, and community or systems level.

> *At the* ***individual level****, leaders are staff, members of the community, and champions. Their skills and confidence are enacted through their roles and practice (work). They lead by providing support, establishing partnerships, being engaged and involved, and supporting the development and implementation of services, programs, and policies. Their work occurs locally and is fueled by their commitment.*
>
> *The* ***organization*** *supports leadership through its work, including projects, programs, and policies. The structures and processes of a public health organization support the community as well as its employees. The organization provides support and advocacy on important health issues. The organization provides training and education within the organization and with community partners. The organization works to be successful and address the social determinants of health, including racism.*
>
> *At the* ***community and systems level****, leaders (and partners) build coalitions, engage in political activity, are involved, and provide support. Capacity building and policy are tools and resources used by leaders at this level. Interventions and leadership action occur at a societal and local level, reinforcing that context matters. At these levels, evidence, change, and disparities inform actions of the leaders.*

Bridging and enabling

An early emerging theme was the bridging nature of public health leadership. Ninety-five of the 510 data elements (19%) were included in this theme, and they were extracted from 21 of the 27 studies (78%). The following description of the bridging and enabling aspect of public health leadership was derived from the words most often used in the data elements. The description of this aspect of leadership is proposed as a unique element of public health leadership to advance health equity.

> *Participating, collaborating, engaging, and partnering are processes that facilitate the* ***bridging and enabling*** *dimension of public health leadership. Through structures and processes, action is taken and support is provided. Participating in political advocacy as well as building capacity strengthen the leader's ability to enable others, with leaders working most consistently at a local level to address disparities.*

Bridging and enabling aspects of leadership found in this scoping review indicated bidirectional and multidirectional descriptions of relationships, partnerships, and collaborations. Some examples included addressing the incoherence between national and local levels in terms of ethos or ideology hindering policy implementation, linking local issues with what was already a political priority, building bridges between communities to foster cross-cultural integration, and ensuring alignment of leadership capacity with community readiness.

The description of the bridging and enabling aspect of leadership reinforces the findings of the NCCDH (2013b) appreciative inquiry into the factors that influence public health leadership for health equity in Canada. Leaders in that project described themselves as having a foot in each of the community and organizational systems, and, through that set of "bridging" relationships, they were able to enact their leadership to advance health equity. In this way,

transcendent leadership is relevant to individual public health practitioners, the organizations responsible for the delivery of public health policy and programs, and the community or society as a whole (Koh, 2009). It is also consistent with the widely used definition of public health presented in the previous section as an "organized effort of society" (Last, 2007, p. 306) as well as "collaborative action to improve population-wide health and reduce health inequalities" (Bailey & Dal Poz, 2010, p. 494).

As identified earlier, the use of complexity leadership theory, specifically enabling leadership, would assist to expand this unique and important aspect of public health leadership to advance health equity. Enabling leadership occurs at all levels of the system and intends to create the conditions for adaptive or community-level leadership to thrive by managing the entanglement of the administrative functions of an organization (Uhl-Bien et al., 2007).

Values

Another theme that emerged early in the scoping review was related to the values that underpin or inform public health leadership to advance health equity. There were fewer data elements in this theme, 40 of the 510 data elements (8%) extracted from 44% of the studies (12/27); however, there was strong alignment with values identified in the public health leadership literature. J. M. Burns (2003) saw values as "power resources" and, at the core of transforming leadership as "values strengthen leaders' capacity to reach out to wider audiences and … clarify the relations between individualism and collectivism, self-interest and altruism, liberty and equality" (p. 212). The following description of values and how they guide public health leadership was derived from the words most often used in the data elements extracted from the included studies. The description of this aspect of leadership is proposed as a unique element of public health leadership to advance health equity.

Community members, leaders, and politicians work from personal values, beliefs, ethos, and ideology. Justice and the importance of reflection on the social determinants of health, disparities, and marginalization figure strongly in public health leadership. These values play out in society and in the community, informing how health and health issues are addressed as well as programs are developed.

Public health practice "is grounded in the values of equity, social justice, and sustainable development" (PHAC, 2008, p. 3). The goal of public health—to minimize preventable death and disability for all—is "integral to social justice … to ensure the conditions for people to have control over their lives are favourable and equitably distributed so they are able to influence their health and that of their families and communities" (PHAC, 2008, p. 14). Social justice "stresses the fair distribution of common advantages and the sharing of common burdens" (Gostin & Powers, 2006, p. 1054). At its centre are twin moral imperatives: "to advance human well-being by improving health *and* do so by focusing on the needs of the most disadvantaged" (Gostin & Powers, 2006, p. 1053). Falk-Rafael (2005) eloquently described this way of practicing for public health nurses as working at the:

> intersection where societal attitudes, government policies, and people's lives meet … [and that] … creates a moral imperative not only to attend to the health needs of the public but also, like Nightingale, to work to change the societal conditions contributing to poor health."(p. 219)

This way of practicing is described as a trombone slide, where one is witnessing social injustice downstream and advocating (working) for health equity upstream (Falk-Rafael & Betker, 2012).

5.3 Tools, Strategies, and Mechanisms to Support or Develop Public Health Leadership

Seven categories of tools, strategies, and mechanisms to support or develop public health leadership were described in the research studies included in the scoping review and received high levels of agreement from the survey respondents. These strategies can be considered individually, subsets, or as a complete set. The strategies are reflective of the everyday leadership of individual public health practitioners, public health organizations, and communities themselves. The tools, strategies, and mechanisms include supportive processes, structures, and models; access to relevant and usable evidence; institutionalized equity-informed policy and program development, implementation, and evaluation; public health workforce and practice development; active and facilitated discourse about values, ethics, and political activity; equity-informed quality improvement, evaluation, and accreditation; and relevant conceptual and theoretical frameworks.

While each of these tools, strategies, or mechanisms holds promise, they require further reflection and supporting evidence, as well as further development, use, and evaluation. Skill, in the use of these tools, strategies, and methods, is not developed sufficiently at the undergraduate level, where most public health practitioners are launched. Hence, it is important to note this capacity gap as we move forward.

5.4 Recommendations for Further Research

Petticrew and Roberts (2008) described the nature of the public health evidence base as underpopulated, dispersed, and different from other health literature. They stated that there are "few outcome evaluations of public health interventions and fewer still that examine the distributive effects of interventions across different social groups—and can thus shed light on the effective means of reducing health inequalities" (p. 199). Eight years later, this scoping review

has found that the evidence base for public health leadership to advance health equity is dispersed and very much in its infancy. It is an area where increased attention must be paid given the global inequities that exist and the expectation of public health to provide effective leadership to advance health equity. The field of health inequities research is emerging and as such is not cohesive (Garthwaite et al., 2015).

In 2011, a team at the SDHU identified 10 promising practices to guide local public health practice to reduce social inequities in health. One of the 10 promising practices identified was to contribute to the evidence base. The SDHU review team found that much of the literature and thus evidence and knowledge base was “produced by practitioners working in a service delivery context in which publishing is not a priority” (SDHU, 2011, p. 5). As in this review, the evidence they located was difficult to find, exploratory in nature, emerging, and related to a specific and usually local setting. As a result, they encouraged contribution to the evidence base of articles and papers on innovations reflecting action to advance health equity from everyday practice. Another important way to contribute to the evidence base is through “intentional dissemination of knowledge, whether through traditional mechanisms such as journal publications, through reports, or through other knowledge exchange mechanisms such as communities of practice” (SDHU, 2011, p. 5).

Despite its limitations, the body of evidence in this scoping review is a useful starting point to describe the evidence base for effective public health leadership. There is a lack of studies specifically examining public health leadership to advance heath equity in this synthesis, which reflects a gap in the leadership and public health research literature. To fill the gap, research will need to focus not only on individual leaders but also the organizations in which they work as well as the communities and contexts. Similar to the conclusions of Vogel and

Masal (2015) in their review of public service leadership research, there is a need to shift focus to the "public" or community aspect of public health leadership, to focus on "followership" as well as leadership, and to shift from the focus on individual leaders to the policy and community contexts in which public health leadership is situated.

Leadership at all levels requires examination. It is hoped that this work will inspire greater interest and efforts in this area by public health researchers but also by researchers from the community and other sectors. Community-based participatory research methods and other innovative participatory methods, such as appreciative inquiry, would lend themselves well to this area of inquiry (Garthwaite et al., 2015).

5.5 Limitations

The scoping review is an emerging research method, and there was little guidance available during this scoping review regarding tested processes and tools. One of the most helpful tools was published by the Joanna Briggs Institute in late 2015 (Peters, Godfrey, McInerney, et al., 2015).

A potential limitation of this scoping review was the broad eligibility criteria for inclusion of studies. The criteria were left broad to maximize the identification of the full range of potential existing literature (Peters, Godfrey, McInerney, et al., 2015). However, this broad perspective, while comprehensive, resulted in a screening process that was time consuming, complex, and, at times, very frustrating. The number of articles, range of methods, and topics considered in the studies made finding a focus—and a logical set of inclusion and exclusion criteria that could be applied rigorously—difficult. It also made it more difficult to plan for and execute the analysis and synthesis of the results of the scoping review. These highly iterative processes may limit replication of the scoping review.

Three recommended enhancements to the method were made by Levac et al. (2010) and are consistent with the experience of the researcher. Future scoping reviews would benefit from: a common definition and purpose(s) for scoping reviews, criteria to assess the methodological rigour and quality of a scoping review, and accepted processes for when and how quality assessment of included studies is done (Levac et al., 2010). Anderson et al. (2008) set out a number of criteria to assess the value and utility of a scoping study in health policy contexts—these could be applied to other scoping reviews. Levac et al. (2010) also suggested "formalizing knowledge translation as a required element of scoping methodology" (p. 9). This could be part of the consultative or validation process. The use of the online survey provided a knowledge translation opportunity for those who participated and is recommended as a useful phase for future scoping reviews.

Other limitations include: survey respondents were Canadian public health leaders and the literature set was global in nature and heavily weighted with studies conducted in the United States; and the search was limited to articles written in English or French, omitting research conducted and reported in other languages. Clarity in interpretation and application of key definitions (e.g., public health, leadership, social determinants of health, health equity, inequality, and disparity) in a standard way was a challenge to conducting the scoping review and is considered a limitation as studies may have been missed in the search and screening processes.

5.6 Conclusion and Considerations

The aim of this scoping review was to scope the published research studies on public health leadership to advance health equity in order to identify strengths and gaps in the literature and research evidence base. The scoping review was guided by the research question: *What*

aspects of public health leadership to advance health equity have been considered by research? Using Arksey and O'Malley's (2005) six-phase framework as a guide, the scoping review was conducted to meet the following four objectives:

1. Identify the "extent, range, and nature" (Arksey & O'Malley, 2005, p. 21) of research studies examining public health leadership to advance health equity, and thereby identify strengths and gaps;
2. Identify, compare, and contrast the research questions, methods, and theoretical frameworks used;
3. Gain an understanding of the aspects and description of public health leadership at the individual, organizational, and system level; and
4. Identify tools, strategies and mechanisms used to support public health leadership to advance health equity.

Following a rigorous and transparent process that included a comprehensive and extensive search of the peer-reviewed and grey literature and multiple levels of screening and review, 27 studies were included in the scoping review. Data were extracted and analyzed using multiple processes and methods. The findings, including the "hiddenness" of this evidence base and the substantive gaps found in the research literature, have been presented and discussed.

During the time that this scoping review was being conducted, there have continued to be repeated and strong calls for leadership by public health and their partners and collaborators at all levels to take action that will bring results in addressing the social determinants of health and advancing health equity. The results of this scoping review provide insight into the evidence base to guide this work and some direction to public health leadership practice, policy, education, and

research. The following considerations are offered as a result of this scoping review of the literature.

5.6.1 Practice

Individuals working in public health settings and in communities, public health and community organizations, and governing authorities are encouraged to use the seven categories of tools, strategies, and mechanisms identified in this study to support public health leaders and leadership at individual, organizational, community, and system levels. The tools, strategies, and mechanisms identified include supportive organizational processes, structures, and models; access to relevant and usable information and evidence; institutionalized equity-informed policy and program development, implementation, and evaluation; public health workforce and practice development; active and facilitated discourse about values, ethics, and political activity; equity-informed quality improvement, evaluation, and accreditation; and development and use of relevant conceptual and theoretical frameworks. While it is acknowledged that each holds promise, further reflection, refinement, and supporting evidence are required. Sharing experiences of how these or similar tools, strategies, and mechanisms support public health leadership to advance health equity will add to and strengthen the repertoire.

The PHAC can consider the findings of this scoping review when they revise or refresh the 2008 *Core Competencies for Public Health in Canada*. Each of the seven disciplines (i.e., public health nursing, environmental health officers, public health physicians) that have public health discipline-specific competencies is encouraged to use these findings when they consider revisions. Governments, public health organizations, and regional health authorities can use the relational aspects, the attributes, and the types of knowledge of leaders that are described in the findings of this scoping review to inform job descriptions of public health practitioners. Koh and

Nowinski (2010) identified: knowledge in social strategy and public health sciences, political will, and well developed interpersonal skills as key to effective public health leadership to achieve health equity.

Public health leaders need opportunities to develop the knowledge, skills, and attitudes required to advocate for health equity as well as access to organizational capacities and resources including adequate budget, staff, and high-quality population health data (NCCDH, 2013b). Linking and bridging organizational activities with community actions is central to public health leadership to advance health equity (NCCDH, 2013b). Lind, Betker, and Lind-Kosten (2016) offered a set of suggestions for action at the community, organizational, and system levels by public health practitioners and leaders, including to nurture the leader in all, including ourselves, as well as to "act politically" and "promote equity in health policy and program planning" (p. 137).

Continued effort to clarify, reinforce, develop, and support the essential roles for public health practitioners to advance health equity is required within and outside of public health organizations. As a starting place, the role framework produced by the NCCDH in 2013, *Let's Talk: Public Health Roles for Improving Health Equity,* describes four roles for public health to address the social determinants of health and advance health equity:

1) Assess and report on a) existence and impact of health inequities, and b) effective strategies to reduce these inequities.
2) Modify and orient interventions and services to help reduce inequities, with an understanding of the unique needs of populations that experience marginalization.
3) Partner with other government and community organizations to identify ways to improve health outcomes for populations that experience marginalization.

4) Lead, support and participate with other organizations in policy analysis and development, and in advocacy for improvements in in the determinants of health. (p. 4-5)

As Koh and Jacobson (2009) stated, “the artful public health leader will be one who can function in an ambiguous arena without clear boundaries or hierarchies, using a chaotic context as a starting point for change” (p. 200).

5.6.2 Theory

Despite the plethora of leadership theories in the literature, few have been developed within public health or are being used in public health. Academic and practice partnerships to investigate emerging theoretical and conceptual frameworks are needed to assist in the development of public health leadership capacity at all levels. A particular focus on the bridging and enabling aspects of public health leadership to advance health equity is recommended as it appears to hold promise in linking community and population needs with organizations situated to provide support and services to address inequities. An examination of current and emerging leadership theories is required to assess the consistency of these theories with the core values of public health such as social justice. For example, complexity leadership theory does not view the leader and those around him/her as a being in a linear exchange process but rather facilitates a consideration of the complex dynamics of contemporary leadership (Avolio et al., 2009). Complexity leadership theory provides a “new way of perceiving leadership—a theoretical framework for approaching the study of leadership that moves beyond the managerial logics of the Industrial Age to meet the new leadership requirements of the Knowledge Era” (Uhl-Bien et al., 2007, p. 315).

Building on the results of this scoping review, it would be constructive to conduct a metasynthesis of the studies in this scoping review that contributed the highest number of data elements to the metasummary (i.e., eight studies contributed 29 or more data elements each). A first step, to establish the trustworthiness of the included literature, would be to conduct a quality appraisal of the studies. The aim of the metasynthesis would be to contribute a preliminary theoretical framework to guide public health leadership to advance health equity. It should incorporate a participatory process to seek input from the public health community and those we serve, and test the theory in the field to validate it and foster its evolution.

Given the complexity of the situations in which public health leaders are working, and the daily ethical considerations of their practice, the CPHA should consider the development and use of an ethical framework for public health in Canada. The ethical framework would be a useful companion to the *Core Competencies for Public Health in Canada* (PHAC, 2008) and the *Leadership Competencies for Public Health Practice in Canada* (CHNC, 2015).

5.6.3 Policy

Government and public health organizations must ensure policies are in place for contemporary and ongoing leadership and practice development for public health at all levels of organizations and systems. Organizations will need to develop policies to support the use of the tools, strategies, and mechanisms identified above that will support public health leadership to advance health equity at an individual, organizational, and system level.

Developing policy “knowledge” and capacity within public health and its partners must be a priority for governments, organizations, and practitioners. This is essential if public health leadership for policy development, monitoring, and evaluation is to occur. Most of the recent public health accomplishments have been due to effective use of policy levers (CPHA, 2010).

5.6.4 Research

There is a significant gap in the research evidence base to inform public health leadership to advance health equity. What exists is difficult to locate and primarily at an exploratory and/or descriptive level. Enhanced efforts in this area, are required urgently if public health leaders are to have access to the required research evidence base.

A unique opportunity to contribute to the evidence base is that of program evaluations using rigorous research methods. Organizations, practitioners, and academics must recognize and use the opportunities that program evaluation processes provide. Through these types of research projects, a significant contribution to building the evidence base for public health leadership to advance health equity may be achieved. This effort will require all to explore and establish structures and processes that facilitate and strengthen collaborative relationships across communities, public health organizations, and the research community so opportunities for participatory, developmental, and capacity-building evaluation and research projects are initiated, implemented, supported, and championed. Participatory research methods are well suited to ongoing assessment and evaluation, when projects, programs, or policies are being implemented or are looking to redevelop or change.

5.6.5 Education

There is a need for enhanced continuing professional development opportunities in public health to develop leadership attributes and knowledge. The recently released *Leadership Competencies for Public Health Practice in Canada* (CHNC, 2015) provides a platform for leadership development. There is an excellent opportunity for Canadian organizations, such as the CPHA, Canadian Nurses Association, CHNC, and Canadian Institute of Public Health Inspectors, to collaborate on joint or complementary educational and knowledge translation

offerings. The National Collaborating Centres for Public Health, the PHAC, and provincial and territorial governments have a stake in these educational events and would be excellent partners.

The scoping review identified that organizational and community contexts contributed to growth in leadership capacity. Mentoring and coaching relationships, as well as belonging to networks and teams of practitioners, supported the development of public health leadership. Other actions to consider include engaging in regular dialogue and conversations to promote discourse about equity, social determinants of health, and social justice using historical accounts, stories from practice, or tools designed to incorporate these considerations (Lind et al., 2016). Professional associations such as the CHNC, Canadian Institute of Public Health Inspectors, and CPHA, play an important role by providing a platform for this discourse through virtual, print, and in-person methods.

The majority of the studies (70%) in this scoping review identified some level of support for the development of leaders as being essential. In most cases, leadership was developed through formal training and education, and through experience. This is critical as undergraduate programs in several disciplines are where the public health workforce in Canada is launched. Until very recently, leadership across networks of organisations, communities, and sectors has received very little attention in the healthcare leadership literature, and public health leaders who have been in practice for a number of years may not have this knowledge base from formal education (Srinivasan & Holsinger, 2012; Taylor, 2012). Given the emerging nature of this way of leading, an idea of merit that was mentioned in several of the included studies is tailoring regular educational offerings for senior decision makers and policy makers on relevant topics such as public health, leadership, the social determinants of health, and health equity. However, continuing professional development on the integration of the concepts of leadership,

followership, equity, social determinants of health, and social justice is required across the system, not only for senior leaders. All who are or have the potential to be involved in this effort to advance health equity need to have opportunity, in fact the requirement, to build competency for collective action. "The most enduring legacy of any public health leader springs from honoring and creating a renewed sense of community" (Koh, 2009, p. S16).

5.7 Summary

Health inequities are a growing and persistent public health issue locally, regionally, nationally, and globally. There is substantive and growing evidence that addressing these inequities is a moral imperative and a matter of social justice. Public health leadership globally and locally is critical to advance health equity. Public health leadership has been defined in many different ways and is considered an influence that moves individuals, communities, organizations, and systems toward achieving goals that will result in better health and well-being. However there is scant research evidence to describe public health leadership to advance health equity and what is available is difficult to locate. Thus a scoping review of the literature was undertaken to answer the question: *What aspects of public health leadership to advance health equity have been considered by research?*

A scoping review, an emerging research method, is especially useful in a field where the evidence base is underdeveloped or emerging, as is the case with public health leadership, social determinants of health, and health equity. The method used in this research built on and expanded the framework articulated by Arksey and O'Malley (2005) which included the following six phases: (1) identify the research question; (2) search for relevant studies; (3) select studies; (4) chart data; (5) collate, summarize, and report results; and, (6) validate findings with key stakeholders. While this framework provided a foundation for the research, the processes of

charting, summarizing and analysing described in this dissertation represent a further refinement of the method especially in terms of phase six, the validation and augmentation of the analysis of the data and the findings. The additional phase, the metasummary represents a further development of the research method and facilitated deeper mining and analysis of the information in the included studies as well as data visualization in the form of word clouds. Continued development of the scoping review methodology is encouraged so as to enhance the usefulness of scoping review findings within leadership, public health and health equity research and practice (Levac, Colquhoun & O'Brien, 2010). .

The extensive scoping review of the literature described in this dissertation examined the research evidence base. An initial search of the literature and subsequent updates, found close to 8,000 articles. Using systematic and rigorous selection processes the search results were narrowed to 27 included research studies. Extensive data extraction from the included studies and subsequent analysis iteratively revealed the factors that contribute to public health leadership at the individual, organizational, community, and system levels. Key findings of the scoping review are that the attributes of the public health leader matter, multiple knowledges are required, and relationships are central to public health leadership to advance health equity. The research evidence base to guide public health leadership is in its infancy, difficult to locate and diverse in its use of methods and designs. A set of innovative and emerging tools, strategies, and mechanisms to support and develop public health leadership were explicated and will be useful for organizations and leaders.

A further mining of the 27 included studies through the development of a metasummary resulted in descriptions of public health leadership to advance health equity. These descriptions illuminate three aspects that, in combination, are unique to public health leadership to advance

health equity. First, public health leadership to advance health equity occurs at multiple systems levels simultaneously. In other words, public health leadership occurs at the local community level, the organizational level and at a societal level concurrently. Second, public health leadership to advance health equity includes an important bridging aspect between these systems levels. The leader is able to move between and bridge the community and the organization while considering and influencing the political and social environment. This ability to work in the "in-betweens" and influence or take action in these spaces affects the range of interventions, outcomes and policy levers available. Finally, public health leadership to advance health equity is grounded in a unique set of values. The values of social justice, equity, and solidarity were noted in the 27 included studies. In Canada, the values important in public health include "a commitment to equity, social justice and sustainable development, recognition of the importance of the health of the community as well as the individual, and respect for diversity, self-determination, empowerment and community participation" (PHAC, 2008, p. 3). Findings of this scoping review and metasummary reinforce this set of values and emphasize their importance for public health leadership to advance health equity.

References

American Public Health Association. (n.d.). What is public health? Retrieved from https://www.apha.org/what-is-public-health

Anderson, S., Allen, P., Peckham, S., & Goodwin, N. (2008). Asking the right questions: Scoping studies in the commissioning of research on the organisation and delivery of health services. *Health Research Policy and Systems*, *6*(7). doi:10.1186/1478-4505-6-7

Anderson-Lewis, C., Cuy Castellanos, D., Byrd, A., Zynda, K., Sample, A., Blakely Reed, V., ... Yadrick, K. (2012). Using mixed methods to measure the perception of community capacity in an academic–community partnership for a walking intervention. *Health Promotion Practice*, *13*, 788-796. doi:10.1177/1524839911404230

Annett, H. (2009). Leadership in public health: A view from a large English PCT co-terminous with a local authority. *Journal of Public Health, 31*, 205-207. doi:10.1093/pubmed/fdp033

Arksey, H., & O'Malley, L. (2005). Scoping studies: Towards a methodological framework. *International Journal of Social Research Methodology, 8*, 19-32. doi:10.1080/1364557032000119616

Armstrong, R., Hall, B. J., Doyle, J., & Waters, E. (2011). 'Scoping the scope' of a cochrane review. *Journal of Public Health*, *33*, 147-150. doi:10.1093/pubmed/fdr015

Aspect. (n.d.). In *Dictionary.com*. Retrieved from http://dictionary.reference.com/browse/aspect

Avolio, B. J., Walumbwa, F. O., & Weber, T. J. (2009). Leadership: Current theories, research, and future directions. *Annual Review of Psychology, 60,* 421-449. doi:10.1146/annurev.psych.60.110707.163621

Bailey, R. J., & Dal Poz, M. (2010). Building the public health workforce to achieve health-related development goals: Moving forward in collaboration. *Journal of Public Health Policy, 31*, 494-497. doi:10.1057/jphp.2010.34

Bass, B. M. (1997). Does the transactional–transformational leadership paradigm transcend organizational and national boundaries? *American Psychologist, 52*, 130-139. doi:10.1037/0003-066X.52.2.130

Bass, B. M., & Riggio, R. E. (2006). *Transformational leadership* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum Associates.

Baum, F. (2007). Cracking the nut of health equity: Top down and bottom up pressure for action on the social determinants of health. *Global Health Promotion, 14*, 90-95. doi:10.1177/10253823070140022002

Baum, F. E., Bégin, M., Houweling, T. A. J., & Taylor, S. (2009). Changes not for the fainthearted: Reorienting health care systems toward health equity through action on the social determinants of health. *American Journal of Public Health, 99*, 1967-1974. doi:10.2105/AJPH.2008.154856

Begun, J., & Malcolm, J. (2014). *Leading public health: A competency framework*. New York, NY: Springer.

Bekemeier, B., Grembowski, D., Yang, Y., & Herting, J. R. (2012). Leadership matters: Local health department clinician leaders and their relationship to decreasing health disparities. *Journal of Public Health Management & Practice*, *18*(2), E1-E10. doi:10.1097/PHH.0b013e318242d4fc

Bekemeier, B., Walker Linderman, T., Kneipp, S., & Zahner, S. J. (2015). Updating the definition and role of public health nursing to advance and guide the specialty. *Public Health Nursing, 32,* 50-57. doi:10.1111/phn.12157

Betker, C., & Bewick, D. (2016). Financing, policy, and politics of healthcare delivery. In L. L. Stamler, L. Yiu, & A. Dosani (Eds.), *Community health nursing: A Canadian perspective* (4th ed., pp. 17-36). Toronto, ON: Pearson Canada.

Brassolotto, J., Raphael, D., & Baldeo, N. (2014). Epistemological barriers to addressing the social determinants of health among public health professionals in Ontario, Canada: A qualitative inquiry. *Critical Public Health*, *24*, 321-336. doi:10.1080/09581596.2013.820256

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*, 77-101. doi:10.1191/1478088706qp063oa

Braveman, P. (2014). What are health disparities and health equity? We need to be clear. *Public Health Reports, 129*(Suppl. 2), 5-8. Retrieved from http://www.publichealthreports.org/issueopen.cfm?articleID=3074

Braveman, P., Egerter, S., & Williams, D. R. (2011). The social determinants of health: Coming of age. *Annual Review of Public Health, 32*, 381-398. doi:10.1146/annurev-publhealth-031210-101218

Brien, S. E., Lorenzetti, D. L., Lewis, S., Kennedy, J., & Ghali, W. A. (2010). Overview of a formal scoping review on health system report cards. *Implementation Science*, *5*(2). doi:10.1186/1748-5908-5-2

Brussoni, M., Olsen, L. L., & Joshi, P. (2012). Aboriginal community-centered injury surveillance: A community-based participatory process evaluation. *Prevention Science*, *13*, 107-117. doi:10.1007/s11121-011-0258-x

Burns, J. M. (1978). *Leadership*. New York, NY: Harper & Row.

Burns, J. M. (2003). *Transforming leadership*. New York, NY: Atlantic Monthly Press.

Burns, J. P. (2001). Complexity science and leadership in healthcare. *Journal of Nursing Administration, 31,* 474-482. doi:10.1097/00005110-200110000-00011

Butler-Jones, D. (2008). *The Chief Public Health Officer's report on the state of public health in Canada, 2008: Addressing health inequalities*. Retrieved from Public Health Agency of Canada website: http://www.phac-aspc.gc.ca/cphorsphc-respcacsp/2008/fr-rc/pdf/CPHO-Report-e.pdf

Came, H. (2014). Sites of institutional racism in public health policy making in New Zealand. *Social Science & Medicine*, *106*, 214-220. doi:10.1016/j.socscimed.2014.01.055

Campbell Collaboration. (2001). *Guidelines for preparation of review protocols* (version 1.0). Retrieved from http://www.campbellcollaboration.org/artman2/uploads/1/C2_Protocols_guidelines_v1.pdf

Canadian Nurses Association. (2010). *Social justice ... a means to an end, an end in itself* (2nd ed.). Retrieved from https://www.cna-aiic.ca/~/media/cna/page-content/pdf-en/social_justice_2010_e.pdf

Canadian Public Health Association. (2001). *The future of public health in Canada: Canadian Public Health Association Board of Directors discussion paper*. Retrieved from http://www.cpha.ca/uploads/policy/future_e.pdf

Canadian Public Health Association. (2010). *Public health–community health nursing practice in Canada: Roles and activities*. (4th ed.). Retrieved from http://www.cpha.ca/uploads/pubs/3-1bk04214.pdf

Carlton, E. L., Holsinger, J. W., Jr., Riddell, M. C., & Bush, H. (2015a). Full-range public health leadership, part 1: Quantitative analysis. *Frontiers in Public Health, 3*(73), 1-8. doi:10.3389/fpubh.2015.00073

Carlton, E. L., Holsinger, J. W., Jr., Riddell, M. C., & Bush, H. (2015b). Full-range public health leadership, part 2: Qualitative analysis and synthesis. *Frontiers in Public Health, 3*(174), 1-9. doi:10.3389/fpubh.2015.00174

Carr, S. M., Lhussier, M., Reynolds, J., Hunter, D. J., & Hannaway, C. (2009). Leadership for health improvement – implementation and evaluation. *Journal of Health Organization and Management, 23*, 200-215. doi:10.1108/14777260910960939

Catalani, C. E. C. V., Veneziale, A., Campbell, L., Herbst, S., Butler, B., Springgate, B., & Minkler, M. (2012). Videovoice: Community assessment in post-Katrina New Orleans. *Health Promotion Practice*, *13*, 18-28. doi:10.1177/1524839910369070

Catford, J. (1997) Developing leadership for health: Our biggest blindspot. *Health Promotion International, 12*, 1-4. Retrieved from http://heapro.oxfordjournals.org/content/12/1/1.full.pdf+html

Chapman, C., Getha-Taylor, H., Holmes, M. H., Jacobson, W. S., Morse, R. S., & Sowa, J. E. (2016). How public service leadership is studied: An examination of a quarter century of scholarship. *Public Administration, 94*, 111-128. doi: 10.1111/padm.12199

Chinn, P. L., & Falk-Rafael, A. (2015). Peace and power: A theory of emancipatory group process. *Journal of Nursing Scholarship, 47*, 62-69. doi:10.1111/jnu.12101

Chinn, P. L., & Kramer, M. K. (2011). *Integrated theory & knowledge development in nursing* (8th ed.). St. Louis, MO: Mosby.

Cochrane Public Health. (n.d.). *Unit five: Asking an answerable question*. Retrieved from https://ph.cochrane.org/sites/ph.cochrane.org/files/uploads/Unit_Five.pdf

Cohen, B. E., Schultz, A., McGibbon, E., VanderPlaat, M., Bassett, R., GermAnn, K., ... Fuga, L. A. (2013). A conceptual framework of organizational capacity for public health equity action (OC-PHEA). *Canadian Journal of Public Health, 104*, e272-e276. Retrieved from http://www.jstor.org/stable/canajpublheal.104.3.e262

Community Health Nurses of Canada. (2011). *Canadian community health nursing professional practice model & standards of practice* (Rev. ed.). Retrieved from https://www.chnc.ca/upload/membership/document/2016-07/chnc-standards-eng-book.pdf

Community Health Nurses of Canada. (2015). *Leadership competencies for public health practice in Canada: Leadership competency statements* (Release 1.0). Retrieved from https://www.chnc.ca/en/competencies

Coote, A., & Angel, J. (2014). *Solidarity: Why it matters for a new social settlement*. Retrieved from New Economics Foundation website: http://s.bsd.net/nefoundation/default/page/file/207c255d8a0c04cba0_sum6b1yy7.pdf

Coughlan, M., Cronin, P., & Ryan, F. (2013). *Doing a literature review in nursing, health and social care.* Thousand Oaks, CA: SAGE.

Crossan, M., Vera, D., & Nanjad, L. (2008). Transcendent leadership: Strategic leadership in dynamic environments. *Leadership Quarterly, 19*, 569–581. doi:10.1016/j.leaqua.2008.07.008

Cummings, G. G., MacGregor, T., Davey, M. Lee, H., Wong, C. A., Lo, E., ... Stafford, E. (2010). Leadership styles and outcome patterns for the nursing workforce and work environment: A systematic review. *International Journal of Nursing Studies, 47*, 363-385. doi:10.1016/j.ijnurstu.2009.08.006

Czabanowska, K., Smith, T., Stankunas, M., Avery, M., & Otok, R. (2013). Transforming public health specialists into public health leaders. *Lancet, 381*, 449-450. doi:10.1016/S0140-6736(13)60245-7

Daghofer, D., & Edwards, P. (2009). *Toward health equity: A comparative analysis and framework for action*. Retrieved from http://opha.on.ca/getmedia/c4536b04-2ce1-44e8-8b40-81bfe75be8f9/HealthEquityComparativeAnalysis-FinalReport-Mar2009.pdf.aspx?ext=.pdf

Daudt, H. M. L., van Mossel, C., & Scott, S. J. (2013). Enhancing the scoping study methodology: A large, inter-professional team's experience with Arksey and O'Malley's framework. *BMC Medical Research Methodology*, *13*(48). doi:10.1186/1471-2288-13-48

Davidson, A. W., Ray, M. A., & Turkel, M. C. (Eds.). (2011). *Nursing, caring, and complexity science: For human–environment well-being*. New York, NY: Springer.

Davis, K., Drey, N., & Gould, D. (2009). What are scoping studies? A review of the nursing literature. *International Journal of Nursing Studies*, *46*, 1386-1400. doi:10.1016/j.ijnurstu.2009.02.010

Davison, C. M., Kahwa, E., Edwards, N., Atkinson, U., Roelofs, S., Hepburn-Brown, C., ... MacFarlane, D. (2013). Ethical challenges and opportunities for nurses in HIV and AIDS community-based participatory research in Jamaica. *Journal of Empirical Research on Human Research Ethics*, *8*, 55-67. doi:10.1525/jer.2013.8.1.55

Day, M., Shickle, D., Smith, K., Zakariasen, K., Oliver, T., & Moskol, J. (2012). Time for heroes: Public health leadership in the 21st century. *Lancet, 380,* 1205-1206. doi:10.1016/S0140-6736(12)61604-3

de Jong, T., & Ferguson-Hessler, M. G. M. (1996). Types and qualities of knowledge. *Educational Psychologist, 31*, 105-113. doi:10.1207/s15326985ep3102_2

de Zulueta, P. C. (2016). Developing compassionate leadership in health care: An integrative review. *Journal of Healthcare Leadership, 8*, 1-10. doi:10.2147/JHL.S93724

Denis, J-L., Langley, A., & Rouleau, L. (2010). The practice of leadership in the messy world of organizations. *Leadership, 6,* 67-88. doi:10.1177/1742715009354233

Dickson, G. S. (2007). *The Pan-Canadian Health Leadership Capability Framework Project: A collaborative research initiative to develop a leadership capability framework for healthcare in Canada: Final report submitted to Canadian Health Services Research Foundation*. Retrieved from Canadian Foundation for Healthcare Improvement website: http://www.cfhi-fcass.ca/migrated/pdf/health_leadership_framework_e.pdf

Dixon-Woods, M., Booth, A., & Sutton, A. J. (2007). Synthesizing qualitative research: A review of published reports. *Qualitative Research, 7,* 374-422. doi:10.1177/1468794107078517

Downing, M., Riess, T. H., Vernon, K., Mulia, N., Hollinquest, M., McKnight, C., ... Edlin, B. R. (2005). What's community got to do with it? Implementation models of syringe exchange programs. *AIDS Education and Prevention, 17*, 68-78. doi:10.1521/aeap.17.1.68.58688

Draper, C. E., Kolbe-Alexander, T. L., & Lambert, E. V. (2009). A retrospective evaluation of a community-based physical activity health promotion program. *Journal of Physical Activity & Health*, *6*, 578-588. doi:10.1123/jpah.6.5.578

Duncan, S. (2016). The history of Community Health Nursing. In L. L. Stamler, L. Yiu, & A. Dosani (Eds.), *Community health nursing: A Canadian perspective* (4th ed., pp. 1-16). Toronto, ON: Pearson Canada.

Edwards, N., & Di Ruggiero, E. (2011). Exploring which context matters in the study of health inequities and their mitigation. *Scandinavian Journal of Public Health, 39*(Suppl. 6), 43-49. doi:10.1177/1403494810393558

Edwards, N. C. (2009). Revisiting our social justice roots in population health intervention research. *Canadian Journal of Public Health, 100*, 405-406. doi:10.17269/cjph.100.2087

El Ansari, W., Oskrochi, R., & Phillips, C. (2009). Engagement and action for health: The contribution of leaders' collaborative skills to partnership success. *International Journal of Environmental Research and Public Health*, *6*, 361-381. doi:10.3390/ijerph6010361

Evidence Partners. (n.d.). DistillerSR [Computer software]. Retrieved from https://distillercer.com

Falk-Rafael, A. (2005). Speaking truth to power: Nursing's legacy and moral imperative. *Advances in Nursing Science, 28*, 212-223. doi:10.1097/00012272-200507000-00004

Falk-Rafael, A., & Betker, C. (2012a). The primacy of relationships: A study of public health nursing practice from a critical caring perspective. *Advances in Nursing Science, 35*, 315-332. doi:10.1097/ANS.0b013e318271d127

Falk-Rafael, A., & Betker, C. (2012b). Witnessing social injustice downstream and advocating for health equity upstream: "The trombone slide" of nursing. *Advances in Nursing Science, 35*, 98-112. doi:10.1097/ANS.0b013e31824fe70f

Fried, L. P., Piot, P., Frenk, J. J., Flahault, A., & Parker, R. (2012). Global public health leadership for the twenty-first century: Towards improved health of all populations. *Global Public Health, 7*(Suppl. 1), S5-S15. doi:10.1080/17441692.2012.702118

Galea, S., & Annas, G. J. (2016). Aspirations and strategies for public health. *Journal of the American Medical Association, 315*, 655-656. doi:10.1001/jama.2016.0198

Gardiner, J. J. (2006). Transactional, transformational, and transcendent leadership: Metaphors mapping the evolution of the theory and practice of governance. *Leadership Review, 6*(2), 62-76. Retrieved from http://middlewaygroup.com/Members/kalun/transformativeleadershipgovernance.pdf

Gardner, J. W. (1990). *On leadership*. New York, NY: Free Press.

Garthwaite, K., Smith, K. E., Bambra, C., & Pearce, J. (2016). Desperately seeking reductions in health inequalities: Perspectives of UK researchers on past, present and future directions in health inequalities research. *Sociology of Health & Illness, 38*, 459-478. doi:10.1111/1467-9566.12374

Gatherer, A., Fraser, A., Hayton, P., & Moller, L. (2010). Public health leadership, social justice and the socially marginalised. *Public Health, 124*, 617-619. doi:10.1016/j.puhe.2010.08.015

Gilbert, K. L., Quinn, S. C., Ford, A. F., & Thomas, S. B. (2010). The urban context: A place to eliminate health disparities and build organizational capacity. *Journal of Prevention & Intervention in the Community*, *39*, 77-92. doi:10.1080/10852352.2011.530168

Goffee, R., & Jones, G. (2000, September-October). Why should anyone be led by you? *Harvard Business Review, 78*(5), 62-70. Retrieved from https://hbr.org/

Goodman, R. M. (2009). A construct for building the capacity of community-based initiatives in racial and ethnic communities: A qualitative cross-case analysis. *Journal of Public Health Management and Practice*, *15*(2), E1-E8. doi:10.1097/01.PHH.0000346019

Gostin, L. O., & Powers, M. (2006). What does social justice require for the public's health? Public health ethics and policy imperatives. *Health Affairs, 25*, 1053-1060. doi: 10.1377/hlthaff.25.4.1053

Graham, H. (2010). Where is the future in public health? *Milbank Quarterly, 88*, 149-168. doi:10.1111/j.1468-0009.2010.00594.x

Grant, M. J., & Booth, A. (2009). A typology of reviews: An analysis of 14 review types and associated methodologies. *Health Information and Libraries Journal, 26*, 91-108. doi:10.1111/j.1471-1842.2009.00848.x

Grimshaw, J. (2010). *A knowledge synthesis chapter*. Retrieved from Canadian Institutes of Health Research website: http://www.cihr-irsc.gc.ca/e/documents/knowledge_synthesis_chapter_e.pdf

Grossman, S. C., & Valiga, T. M. (2012). *The new leadership challenge: Creating the future of nursing* (4th ed.) Philidelphia, PA: F.A. Davis.

Hannaway, C., Plsek, P., & Hunter, D. J. (2007). Developing leadership and management for health. In D. J. Hunter (Ed.), *Managing for Health* (pp.148-172). London, England: Routledge.

Holsinger, J. W., Carlton, E. L., & Jadhav, E.D.. (2015). *Editorial: Leading people - managing organizations: Contemporary public health leadership* (Preventive Medicine and Environmental Health Faculty Publications Paper 37). doi:10.3389/fpubh.2015.00268

Horton, R. (2011). Offline: Where is public health leadership in England? *Lancet, 378*, 1060. doi:10.1016/S0140-6736(11)60976-8

Ingram, M., Schachter, K. A., Sabo, S. J., Reinschmidt, K. M., Gomez, S., De Zapien, J. G., & Carvajal, S. C. (2014). A community health worker intervention to address the social determinants of health through policy change. *The Journal of Primary Prevention*, *35*, 119-123. doi:10.1007/s10935-013-0335-y

Jakubowski, E., Donaldson, L., & Martin-Moreno, J. M. (2014). Developing public health leadership. In B. Rechel & M. McKee (Eds.), *Facets of public health in Europe* (pp. 267-283). Retrieved from World Health Organization Regional Office for Europe website: http://www.euro.who.int/__data/assets/pdf_file/0003/271074/Facets-of-Public-Health-in-Europe.pdf

Jansson, E., Fosse, E., & Tillgren, P. (2011). National public health policy in a local context—implementation in two Swedish municipalities. *Health Policy*, *103*, 219-227. doi:10.1016/j.healthpol.2011.08.013

Johns, S. (2010). Early childhood service development and intersectoral collaboration in rural Australia. *Australian Journal of Primary Health*, *16*, 40-46. doi:10.1071/PY09050

Kaplan, S. A., Calman, N. S., Golub, M., Ruddock, C., & Billings, J. (2006). The role of faith-based institutions in addressing health disparities: A case study of an initiative in the southwest Bronx. *Journal of Health Care for the Poor and Underserved*, *17*(2 Suppl.), 9-19. doi:10.1353/hpu.2006.0088

Keller, L. O., Strohschein, S., & Schaffer, M. A. (2011). Cornerstones of public health nursing. *Public Health Nursing, 28*, 249-260. doi:10.1111/j.1525-1446.2010.00923.x

Kellerman, B. (2007, December). What every leader needs to know about followers. *Harvard Business Review, 85*(12), 84-91. Retrieved from https://hbr.org/

Kelley, R. (1988, November). In praise of followers. *Harvard Business Review, 66*(6), 142-148. Retrieved from https://hbr.org/

Koh, H. K. (2009). Leadership in public health. *Journal of Cancer Education, 24*(Suppl. 2), S11-S18. doi:10.1007/BF03182303

Koh, H. K. (2016). Navigating government service as a physician. *Health Education & Behavior, 43*, 7-10. doi:10.1177/1090198115614318

Koh, H. K., & Jacobson, M. (2009). Fostering public health leadership. *Journal of Public Health, 31*, 199-201. doi:10.1093/pubmed/fdp032

Koh, H. K., & McCormack, M. (2006). Public health leadership in the 21st century. In B. Kellerman (Series Ed.), *Working Papers of the Center for Public Leadership* (Vol. 7, pp. 101-116). Cambridge, MA: Harvard University, Kennedy School of Government. Retrieved from http://hdl.handle.net/1721.1/55951

Koh, H. K., & Nowinski, J. M. (2010). Health equity and public health leadership. *American Journal of Public Health, 100*(Suppl. 1), S9–S11. doi:10.2105/AJPH.2010.191379

Kotter, J. P. (1990, May-June). What leaders really do. *Harvard Business Review, 68*(3), 103-111. Retrieved from https://hbr.org/

Kotter, J. P., & Schlesinger, L. A. (2008, July-August). Choosing strategies for change. *Harvard Business Review, 86*(7/8), 130-139. Retrieved from https://hbr.org/

Kouzes, J. M., & Posner, B. Z. (2010). *The truth about leadership*. San Francisco, CA: Jossey-Bass.

Kouzes, J. M., & Posner, B. Z. (2012). *The leadership challenge: How to make extraordinary things happen in organizations* (5th ed.). San Francisco, CA: Jossey-Bass.

Kouzes, J. M., & Posner, B. Z. (2016). *Learning leadership: The five fundamentals of becoming an exemplary leader.* Hoboken, NJ: Wiley.

Krieger, N., & Birn, A. E. (1998). A vision of social justice as the foundation of public health: Commemorating 150 years of the spirit of 1848. *American Journal of Public Health, 88*, 1603-1506. doi:10.2105/AJPH.88.11.1603

Kuiper, H., Jackson, R. J., Barna, S., & Satariano, W. A. (2012). Local health department leadership strategies for healthy built environments. *Journal of Public Health Management and Practice*, *18*(2), E11-E23. doi:10.1097/PHH.0b013e31822d4c7f

Lang, A., Edwards, N., & Fleiszer, A. (2007). Empty systematic reviews: Hidden perils and lessons learned. *Journal of Clinical Epidemiology, 60*, 595-597. doi:10.1016/j.jclinepi.2007.01.005

Last, J. M. (Ed.). (2007). *A dictionary of public health*. New York, NY: Oxford University Press.

Lathrop, B. (2013). Nursing leadership in addressing the social determinants of health. *Policy, Politics, & Nursing Practice, 14*, 41-47. doi:10.1177/1527154413489887

Leadership. (n.d.). In *Cambridge dictionaries online*. Retrieved from http://dictionary.cambridge.org/dictionary/english/leadership

Lemire, N., Souffez, K., & Laurendeau, M.-C. (2013). *Facilitating a knowledge translation process: Knowledge review and facilitation tool*. Retrieved from Institut national de santé

publique Québec website:
https://www.inspq.qc.ca/pdf/publications/1628_FaciliKnowledgeTransProcess.pdf

Levac, D., Colquhoun, H., & O'Brien, K. K. (2010). Scoping studies: Advancing the methodology. *Implementation Science*, *5*(69). doi:10.1186/1748-5908-5-69

Lind, C., Betker, C., & Lind-Kosten, M. (2016). Social justice and equity for health promotion. In A. R. Vollman, E. T. Anderson, & J. McFarlane (Eds.), *Canadian community as partner: Theory & multidisciplinary practice* (4th ed.). Philadelphia, PA: Wolters Kluwer.

Linderman, A., Pesut, D., & Disch, J. (2015). Sense making and knowledge transfer: Capturing the knowledge and wisdom of nursing leaders. *Journal of Professional Nursing, 31*, 290-297. doi:10.1016/j.profnurs.2015.02.004

Lyons, R. A., Kendrick, D., Towner, E. M. L., Coupland, C., Hayes, M., Christie, N., ... Macey, S. (2013). The advocacy for pedestrian safety study: Cluster randomised trial evaluating a political advocacy approach to reduce pedestrian injuries in deprived communities. *PloS One*, *8*(4), e60158. doi:10.1371/journal.pone.0060158

Marmot, M. (2013). Fair society healthy lives. In N. Eyah, S. A. Hurst, O. F. Norheim, & D. Wikler (Eds.), *Inequalities in health: Concepts, measures, and ethics* (pp. 282-298). New York, NY: Oxford University Press.

Marmot, M. (2015). The health gap: The challenge of an unequal world. London, England: Bloomsbury Publishing.

Marmot, M., Friel, S., Bell, R., Houweling, T. A. J., & Taylor, S. (2008). Closing the gap in a generation: Health equity through action on the social determinants of health. *Lancet, 372,* 1661-1669. doi:10.1016/S0140-6736(08)61690-6

Martin, M., Larsen, B. A., Shea, L., Hutchins, D., & Alfaro-Correa, A. (2007). State Diabetes Prevention and Control Program participation in the Health Disparities Collaborative: Evaluating the first 5 years. *Preventing Chronic Disease*, *4*(1), 1-10. Retrieved from http://www.cdc.gov/pcd/index.htm

Maturana, H. R., & Varela, F. J. (1987). *The tree of knowledge: The biological roots of human understanding.* Boston, MA: New Science Library/Shambhala Publications.

Mays, N., Roberts, E., & Popay, J. (2001). Synthesising research evidence. In N. Fulop, P. Allen, A. Clarke, & N. Black (Eds.*), Studying the organisation and delivery of health services: Research methods* (pp. 188-220). London, England: Routledge.

Meleis, A. I. (2007). *Theoretical nursing: Development and progress* (4th ed.). Philadelphia, PA: Wolters Kluwer/Lippincott, Williams & Wilkins.

Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & PRISMA Group. (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *Annals of Internal Medicine, 151*, 264-269. doi:10.7326/0003-4819-151-4-200908180-00135

Moodie, R. (2016). Learning about self: Leadership skills for public health. *Journal of Public Health Research, 5*(1), 1-6. doi:10.4081/jphr.2016.679

National Collaborating Centre for Determinants of Health. (2011). *Integrating social determinants of health and health equity into Canadian public health practice: Environmental scan 2010*. Retrieved from http://nccdh.ca/images/uploads/comments/Environ_Report_EN_150604.pdf

National Collaborating Centre for Determinants of Health. (2013a). *Let's talk: Public health roles for improving health equity.* Retrieved from http://nccdh.ca/images/uploads/PHR_EN_Final.pdf

National Collaborating Centre for Determinants of Health. (2013b). *What contributes to successful public health leadership for health equity? An appreciative inquiry*. Retrieved from http://nccdh.ca/images/uploads/Appreciative_Inquiry_Full_En.pdf

National Collaborating Centre for Determinants of Health. (2014). *Boosting momentum: Applying knowledge to advance health equity; Environmental scan 2014*. Retrieved from http://nccdh.ca/images/uploads/Full_Environmental_scan_2014.pdf

National Collaborating Centre for Methods and Tools. (2012). *Defining your question: PICO and PS*. Retrieved from http://www.nccmt.ca/registry/resource/pdf/138.pdf

Ndumbe-Eyoh, S., & Moffatt, H. (2013). Intersectoral action for health equity: A rapid systematic review. *BMC Public Health, 13*(1056), 1-13. doi:10.1186/1471-2458-13-1056

Nelson, K., Wright, T., Connor, M., Buckley, S., & Cumming, J. (2009). Lessons from eleven primary health care nursing innovations in New Zealand. *International Nursing Review*, *56*, 292-298. doi:10.1111/j.1466-7657.2008.00702.x

Nowell, B., & Harrison, L. M. (2011). Leading change through collaborative partnerships: A profile of leadership and capacity among local public health leaders. *Journal of Prevention & Intervention in the Community, 39*, 19-34. doi:10.1080/10852352.2011.530162

Okal, J., Kanya, L., Obare, F., Njuki, R., Abuya, T., Bange, T., ... Bellows, B. (2013). An assessment of opportunities and challenges for public sector involvement in the maternal

health voucher program in Uganda. *Health Research Policy and Systems*, *11*(38). doi:10.1186/1478-4505-11-38

Peters, M. D. J., Godfrey, C. M., Khalil, H., McInerney, P., Parker, D., & Soares, C. B. (2015). Guidance for conducting systematic scoping reviews. *International Journal of Evidence-based Healthcare, 13*, 141-146. doi:10.1097/XEB.0000000000000050

Peters, M. D. J., Godfrey, C. M., McInerney, P., Soares, C. B., Khalil, H., & Parker, D. (2015). *The Joanna Briggs Institute reviewers' manual 2015: Methodology for JBI scoping reviews*. Retrieved from Joanna Briggs Institute website http://joannabriggs.org/assets/docs/sumari/Reviewers-Manual_Methodology-for-JBI-Scoping-Reviews_2015_v2.pdf

Petticrew, M., & Roberts, H. (2006). *Systematic reviews in the social sciences: A practical guide.* Retrieved from http://www.cebma.org/wp-content/uploads/Pettigrew-Roberts-SR-in-the-Soc-Sc.pdf

Petticrew, M., & Roberts, H. (2008). Systematic reviews—do they 'work' in informing decision-making around health inequalities? *Health Economics, Policy and Law, 3*, 197-211.

Pham, M. T., Rajić, A., Greig, J. D., Sargeant, J. M., Papadopoulos, A., & McEwen, S. A. (2014). A scoping review of scoping reviews: Advancing the approach and enhancing the consistency. *Research Synthesis Methods*, *5*, 371-385. doi:10.1002/jrsm.1123

Pittman, M. (2013). Leadership for the public's health: Legacy of the healthy communities movement. *National Civic Review, 102*(4), 17-19. doi:10.1002/ncr.21145

Public Health Agency of Canada. (2007). Glossary of terms. Retrieved from http://www.phac-aspc.gc.ca/php-psp/ccph-cesp/glos-eng.php

Public Health Agency of Canada. (2008). *Core competencies for public health in Canada* (Release 1.0). Retrieved from http://www.phac-aspc.gc.ca/php-psp/ccph-cesp/pdfs/cc-manual-eng090407.pdf

Public Health Agency of Canada. (2011). *Reducing health inequalities: A challenge for our times*. Retrieved from http://publications.gc.ca/collections/collection_2012/aspc-phac/HP35-22-2011-eng.pdf

Public Health Agency of Canada. (2014). National Collaborating Centres for Public Health. Retrieved from http://www.phac-aspc.gc.ca/php-psp/ncc-eng.php

Public Health Agency of Canada. (2016). Social determinants of health. Retrieved from http://cbpp-pcpe.phac-aspc.gc.ca/public-health-topics/social-determinants-of-health/

Ransom, J., Schaff, K., & Kan, L. (2012). Is there an association between local health department organizational and administrative factors and childhood immunization coverage rates? *Journal of Health and Human Services Administration*, *34*, 418-455. Retrieved from http://www.jstor.org/journal/jhealhumaservadm

Raphael, D. (2016). Social determinants of health: Key issues and themes. In D. Raphael (Ed.), *Social determinants of health: Canadian perspectives* (3rd ed., pp. 3-31). Toronto: Canadian Scholars' Press.

Reichenpfader, U., Carlfjord, S., & Nilsen, P. (2015). Leadership in evidence-based practice: A systematic review. *Leadership in Health Services, 28*, 298-316.

Reyes, D. J., Bekemeier, B., & Issel, L. M. (2014). Challenges faced by public health nursing leaders in hyperturbulent times. *Public Health Nursing, 31*, 344-353. doi:10.1111/phn.12078

Roemer, M. I. (1993). Higher education for public health leadership. *International Journal of Health Services, 23*, 387-400. doi:10.2190/P3K6-2NQJ-3CLG-ATB8

Rowitz, L. (2014). *Public health leadership* (3rd ed.). Burlington, MA: Jones & Bartlett.

Rumrill, P. D., Fitzgerald, S. M., & Merchant, W. R. (2010). Using scoping literature reviews as a means of understanding and interpreting existing literature. *WORK: A Journal of Prevention, Assessment & Rehabilitation*, *35*, 399-404. doi:10.3233/WOR-2010-0998

Sabo, S., Ingram, M., Reinschmidt, K. M., Schachter, K., Jacobs, L., Guernsey de Zapien, J., ... Carvajal, S. (2013). Predictors and a framework for fostering community advocacy as a community health worker core function to eliminate health disparities. *American Journal of Public Health*, *103*(7), e67-e73. doi:10.2105/AJPH.2012.301108

Saini, M., & Shlonsky, A. (2012). *Systematic synthesis of qualitative research*. New York, NY: Oxford University Press.

Sandelowski, M. (2001). Real qualitative researchers do not count: The use of numbers in qualitative research. *Research in Nursing & Health, 24*, 230-40.

Sandelowski, M., & Barroso, J. (2003). Creating metasummaries of qualitative findings. *Nursing Research, 52*, 226-233.

Sandelowski, M., & Barroso, J. (2007). *Handbook for synthesizing qualitative research*. New York, NY: Springer.

Schim, S., Benkert, R., Bell, S., Walker, D., & Danford, C. (2007). Social justice: Added metaparadigm concept for urban health nursing. *Public Health Nursing, 24*, 73-80. doi:10.1111/j.1525-1446.2006.00610.x

Schmidt, M., Joosen, I., Kunst, A. E., Klazinga, N. S., & Stronks, K. (2010). Generating political priority to tackle health disparities: A case study in the Dutch city of The Hague.

American Journal of Public Health, *100*(S1), S210-S215. doi:10.2105/AJPH.2009.168526

Smith, T., Stankunas, M., Czabanowska, K., de Jong, N., O'Connor, S., & Davis, S. F. (2015). Principles of all-inclusive public health: Developing a public health leadership curriculum. *Public Health, 129*, 182-184. doi:10.1016/j.puhe.2014.12.001

Solar, O., & Irwin, A. (2010). *A conceptual framework for action on the social determinants of health*. Social determinants of health discussion paper 2. Retrieved from World Health Organization website: http://apps.who.int/iris/bitstream/10665/44489/1/9789241500852_eng.pdf

Srinivasan, J., & Holsinger Jr, J. W. (2012). The yin–yang of followership–leadership in public health. *Journal of Public Health*, *20*, 95-98. doi:10.1007/s10389-011-0438-y

Suda, L. V. (2014). In praise of followers (2nd ed.). *PM World Journal, III*(II), 1-11.

Sudbury & District Health Unit. (2011). *10 promising practices to guide local public health practice to reduce social inequities in health: Technical briefing*. Sudbury, ON: Author.

Tagxedo [Computer software]. (2010). Retrieved from http://www.tagxedo.com

Taylor, V. (2012). Leadership as a social process. In V. Taylor (Ed.), *Leading for health and wellbeing* (pp. 20-35). Thousand Oaks, CA: SAGE.

Thorne, S. (2009). The role of qualitative research within an evidence-based context: Can metasynthesis be the answer*? International Journal of Nursing Studies, 46,* 569-575. doi:10.1016/j.ijnurstu.2008.05.001

Tirilis, D., Husson, H., DeCorby, K., & Dobbins, M. (2011). Missing and accounted for: Gaps and areas of wealth in the public health review literature. *BMC Public Health, 11*(757). doi:10.1186/1471-2458-11-757

Uhl-Bien, M. (2006). Relational leadership theory: Exploring the social processes of leadership and organizing. *Leadership Quarterly, 17*, 654-676. doi:10.1016/j.leaqua.2006.10.007

Uhl-Bien, M., & Marion, R. (2009). Complexity leadership in bureaucratic forms of organizing: A meso model. *The Leadership Quarterly*, *20*(4), 631-650.

Uhl-Bien, M., Marion, R., & McKelvey, B. (2007). Complexity leadership theory: Shifting leadership from the industrial age to the knowledge era. *Leadership Quarterly*, *18*, 298-318. doi:10.1016/j.leaqua.2007.04.002

Valaitis, R., Martin-Misener, R., Wong, S. T., MacDonald, M., Meagher-Stewart, D., Austin, P., ... Savage, R. (2012). Methods, strategies and technologies used to conduct a scoping literature review of collaboration between primary care and public health. *Primary Health Care Research & Development*, *13*, 219-236. doi:http://dx.doi.org/10.1017/S1463423611000594

Vermeer, A. J. M., Van Assema, P., Hesdahl, B., Harting, J., & De Vries, N. K. (2015). Factors influencing perceived sustainability of Dutch community health programs. *Health Promotion International, 30,* 473-483. doi:10.1093/heapro/dat059

Vogel, R., & Masal, D. (2015). Public leadership: A review of the literature and framework for future research. *Public Management Review, 17*, 1165-1189. doi:10.1080/14719037.2014.895031

Vollman, A. R., Thurston, W. E., Meadows, L. M., & Strudsholm, T. (2014). Leadership competencies for public health in Canada: Literature review. In A. R. Vollman, W. E., Thurston, L. M. Meadows, & T. Strudsholm, *Leadership competencies for public health in Canada: Environmental Scan* (Appendix A). Retrieved from Community Health Nurses of Canada website: https://www.chnc.ca/upload/membership/document/2016-

07/lcphpc-project-environmentalscan-sep2014final_1.pdf#upload/membership/document/2016-07/lcphpc-project-environmentalscan-sep2014final_1.pdf

What is a systematic review? (2011). In J. P. T. Higgins & S. Green (Eds.), *Cochrane handbook for systematic reviews of interventions* (version 5.1.0). Retrieved from http://handbook.cochrane.org/chapter_1/1_2_2_what_is_a_systematic_review.htm

Wheatley, M. J. (2006). *Leadership and the new science: Discovering order in a chaotic world* (3rd. ed.). San Francisco, CA: Berrett-Koehler.

Whitehead, M., & Dahlgren, G. (2006). *Concepts and principles for tackling social inequities in health: Levelling up Part 1.* Studies on social and economic determinants of population health, No. 2. Retrieved from World Health Organization Regional Office for Europe website: http://www.euro.who.int/__data/assets/pdf_file/0010/74737/E89383.pdf

Whittemore, R., & Knafl, K. (2005). The integrative review: Updated methodology. *Journal of Advanced Nursing, 52*, 546-553. doi:10.1111/j.1365-2648.2005.03621.x

Woodall, J., White, J., & South, J. (2012). Improving health and well-being through community health champions: A thematic evaluation of a programme in Yorkshire and Humber. *Perspectives in Public Health*, *133*, 96-103. doi:10.1177/1757913912453669

World Health Organization. (n.d.-a). Equity. Retrieved from http://www.who.int/healthsystems/topics/equity/en/

World Health Organization. (n.d.-b). Health inequality and inequity. In *Health impact assessment: Glossary of terms used*. Retrieved from http://www.who.int/hia/about/glos/en/index1.html

World Health Organization. (n.d.-c). Human rights. Retrieved from http://www.who.int/topics/human_rights/en/

World Health Organization. (n.d.-d). Public health. In *Glossary of globalization, trade and health terms*. Retrieved from http://www.who.int/trade/glossary/story076/en/

World Health Organization. (1946). *Constitution of the World Health Organization*. Retrieved from http://apps.who.int/gb/bd/PDF/bd47/EN/constitution-en.pdf?ua=1

World Health Organization. (1978). *Declaration of Alma-Ata*. Retrieved from http://www.who.int/publications/almaata_declaration_en.pdf

World Health Organization. (1986). *The Ottawa charter for health promotion*. Retrieved from http://www.who.int/healthpromotion/conferences/previous/ottawa/en/#

World Health Organization. (2005). *The Bangkok charter for health promotion in a globalized world*. Retrieved from http://www.who.int/healthpromotion/conferences/6gchp/hpr_050829_%20BCHP.pdf?ua=1

World Health Organization. (2011*). Rio political declaration on social determinants of health*. Retrieved from http://www.who.int/sdhconference/declaration/Rio_political_declaration.pdf?ua=1

World Health Organization, Commission on Social Determinants of Health. (2008a). *Backgrounder 3: Key concepts*. Retrieved from http://www.who.int/social_determinants/final_report/key_concepts_en.pdf

World Health Organization, Commission on Social Determinants of Health. (2008b). *Closing the gap in a generation: Health equity through action on the social determinants of health*;

Commission on Social Determinants of Health final report. Retrieved from http://apps.who.int/iris/bitstream/10665/43943/1/9789241563703_eng.pdf

Yang, Y., & Bekemeier, B. (2013). Using more activities to address health disparities: Local health departments and their "top executives". *Journal of Public Health Management & Practice*, *19*, 153-161. doi:10.1097/PHH.0b013e318252ee41

Appendix A – Search Strategy

OVID – Medline
Developed for search conducted in February 2012, updated in October 2013, July 2014, and July 2014.

1. "social determinants".tw.
2. Healthcare Disparities/
3. ((health or healthcare) adj2 (equity or inequit* or equality or inequalit* or disparit*)).tw.
4. 1 or 2 or 3
5. (public health and leadership).tw.
6. 4 and 5
7. Public Health Administration/
8. public health/ or exp preventive medicine/
9. Education, Public Health Professional/
10. "Schools, Public Health"/
11. exp Public Health Practice/
12. or/7-11
13. leadership/
14. 12 and 13
15. (public health and leadership).ti.
16. (public health adj3 leadership).tw.
17. or/14-16
18. *Public Health Administration/
19. *Public Health Practice/
20. *public health/
21. or/18-20
22. leadership.tw.
23. champion?.tw.
24. or/22-23
25. 21 and 24
26. Patient Advocacy/
27. Child Advocacy/
28. advocacy.tw.
29. or/26-28
30. 29 and 21
31. exp Community Health Services/og [Organization & Administration]
32. *leadership/
33. 31 and 32
34. exp Community Health Services/og [Organization & Administration]
35. leadership/
36. 24 or 35
37. 34 and 36
38. 6 or 17 or 25 or 30 or 33 or 37

39. *Developing Countries/
40. (africa or india or china or developing countries).ti.
41. exp africa/ or exp caribbean region/ or exp central america/ or exp latin america/ or south america/ or exp antarctic regions/ or exp asia/
42. or/39-41
43. 38 not 42
44. animals/
45. 43 not 44
46. limit 45 to (english or french)
47. limit 46 to yr="2001 -Current"

.tw = text word, searches words in title and abstract
.ti = search terms in title
/ = subject heading within the database
* at end of word = truncation, any number of letters (e.g. disparit* will find disparity or disparities)
* at start of word = indicates that this is a main subject of the articles (e.g. *leadership/)
exp = explode to include related narrower subject headings
adjN = adjacency, the two terms appear within N of each other, in either order

Appendix B – Working Definitions of Core Concepts

Scoping Review Definitions of Terms (2012)

Social determinants of health:

The social determinants of health are social and economic factors that influence health. They are the “circumstances in which people are born, grow up, live, work and age, and the systems put in place to deal with illness. These circumstances are in turn shaped by a wider set of forces: economics, social policies, and politics.” (WHO, 2008)

These include such factors as:

- Income and income distribution
- Education
- Social safety networks
- Employment and working conditions
- Unemployment and job security
- Early childhood development
- Gender
- Race
- Food Insecurity
- Housing
- Social Exclusion
- Health Services
- Aboriginal Status
- Disability (Mikonnen & Raphael, 2010)

Health equity: Health equity is defined as the *“absence of unfair and avoidable or remediable differences in health among social groups”* (Solar & Irwin, 2010) or “absence of unjust, unfair and avoidable systematic social inequalities in health or major social determinants of health”. Population Health Improvement Research Network (PHIRN), 2011) http://www.rrasp-phirn.ca/images/stories/docs/workingpaperseries/wps_Sep_2011_en.pdf

Health inequality/disparity: Health inequality refers to systematic differences in health outcomes between different population groups. “*A health disparity/inequality is a particular type of difference in health (or in the most important influences on health that could potentially be shaped by policies); it is a difference in which disadvantaged social groups—such as the poor, racial/ethnic minorities, women, or other groups who have persistently experienced social disadvantage or discrimination—systematically experience worse health or greater health risks than more advantaged social groups.”* (Braveman, 2006)

Public health leadership: In Canada defined as:
The ability of an individual to influence, motivate, and enable others to contribute toward the effectiveness and success of their community and/or the organization in which they work. It involves inspiring people to craft and achieve a vision and goals. Leaders provide mentoring, coaching and recognition. They encourage empowerment, allowing other leaders to emerge. (PHAC, 2008, p. 12)

References

Braveman, P. (2006). Health disparities and health equity: concepts and measurement. *Annual Review of Public Health, 27:*167–94.

Mikkonen, J., & Raphael, D. (2010). *Social determinants of health: The Canadian facts*. York University, School of Health Policy and Management.

PHIRN Scoping Review Committee. Scoping Review of the Population Health Equity and Intervention Literature in Ontario: 2005-2009. Exchange Working Paper Series, Volume 2, Number 5. University of Ottawa, Ottawa, Canada. Available at rrasp-phirn.ca.

Public Health Agency of Canada. (2008). *Core competencies for public health in Canada* (Release 1.0). Retrieved from http://www.phac-aspc.gc.ca/php-psp/ccph-cesp/pdfs/cc-manual-eng090407.pdf

Solar, O. & Irwin, A. (2010). A conceptual framework for action on the social determinants of health. Social Determinants of Health Discussion Paper 2 (Policy and Practice). Geneva: World Health Organization.

World Health Organization, Commission on Social Determinants of Health. (2008b). *Closing the gap in a generation: Health equity through action on the social determinants of health*; *Commission on Social Determinants of Health final report*. Retrieved from http://apps.who.int/iris/bitstream/10665/43943/1/9789241563703_eng.pdf

Appendix C – DistillerSR™ Examples

Screen shots of data from the scoping review in DistillerSR, a systematic review research tool.

1. Notes of reasons for exclusion

good overview of leadership and attributes specific to public health

not related to equity or doh - exclude??[READ LESS]

none

Not public health but behaviour health organizations - addiction health services; health care reform; funded by public health[READ LESS]

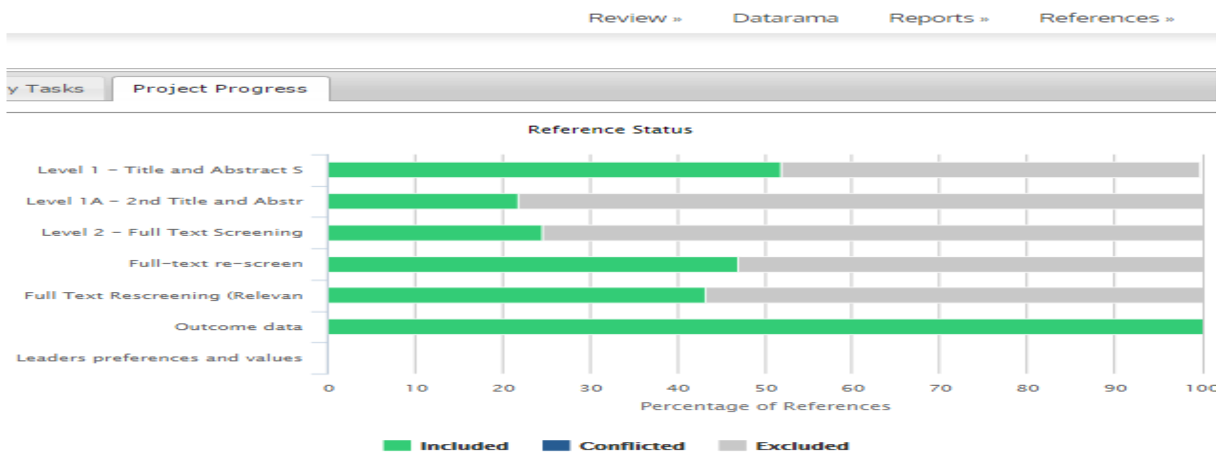
other

formal committees or structures and large memebership

joined up approach
health in all policies

"While many of the women identified these qualities as important to leadership, and particularly their own leadership, they did not necessarily consider themselves to be leaders. Several women noted that they lacked traditional leadership qualities. They were not particularly astute managers, nor were they especially charismatic." (p. 7)[READ LESS]

2. Chart of screening progress



3. Report by citation after data extracted

Inbox (606) - rcbetker@... | DistillerSR

https://v2.systematic-review.ca/MetaDataViewer/MetaDataViewer.php

Sort articles by: Refid

Bibliography Column Header

Filter Articles by Responses

ADD TO QUERY

Level 4 / Level 5 / Level 6 (checked) / Level 7

RUN REPORT and save as

...und 44 articles with 44 sets of data in 0.320 seconds.

First | Previous | 1 | Next | Last — Search:

Refid	User	Level	in the 5?	in 26?	Year of publication? -> 2001	Year of publication? -> 2005	Year of publication? -> 2006	Year of publication? -> 2007	Year of publication? -> 2009	Year of publication? -> 2010	Year of publication? -> 2011	Year of publication? -> 2012	Year of publication? -> 2013	Year of publication? -> 2014
20528	cbetker	6	no	yes										2014
75	cbetker	6		yes							2011			
117	cbetker	6		yes						2010				
245	cbetker	6		yes					2009					

4. Status of references

Inbox (605) - rcbetker@... | DistillerSR - Reference St...

https://v2.systematic-review.ca/Reports/ArticleProgress.php

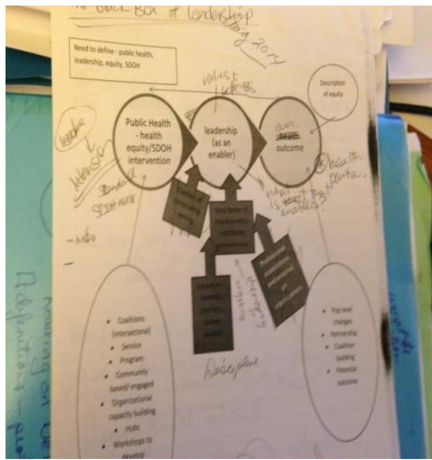
DistillerSR — NCCDH - LEADERSHIP

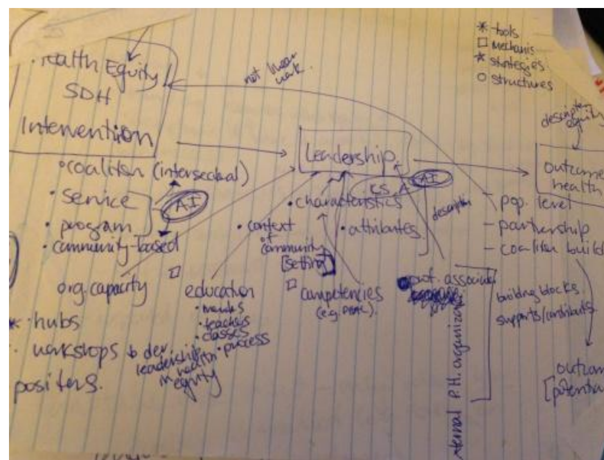
Review » Datarama Reports » References » Forms » Manage Levels » Users » Project »

	Unreviewed	Some Reviews	Included
Level 1 - Level 1 - Title and Abstract Screening	0	0	4039
Level 2 - Level 1A - 2nd Title and Abstract Screen-Leadership	0	0	882
Level 3 - Level 2 - Full Text Screening (Relevance) - Leadership	0	0	217
Level 4 - Full-text re-screen	0	0	102
Level 5 - Full Text Rescreening (Relevance) - Leadership	0	0	44
Level 6 - Leadership Final Data Extraction (Nov final 2014)	0	0	44
Level 7 - Leaders preferences and values	44	0	0
	Unreviewed	Some Reviews	Included

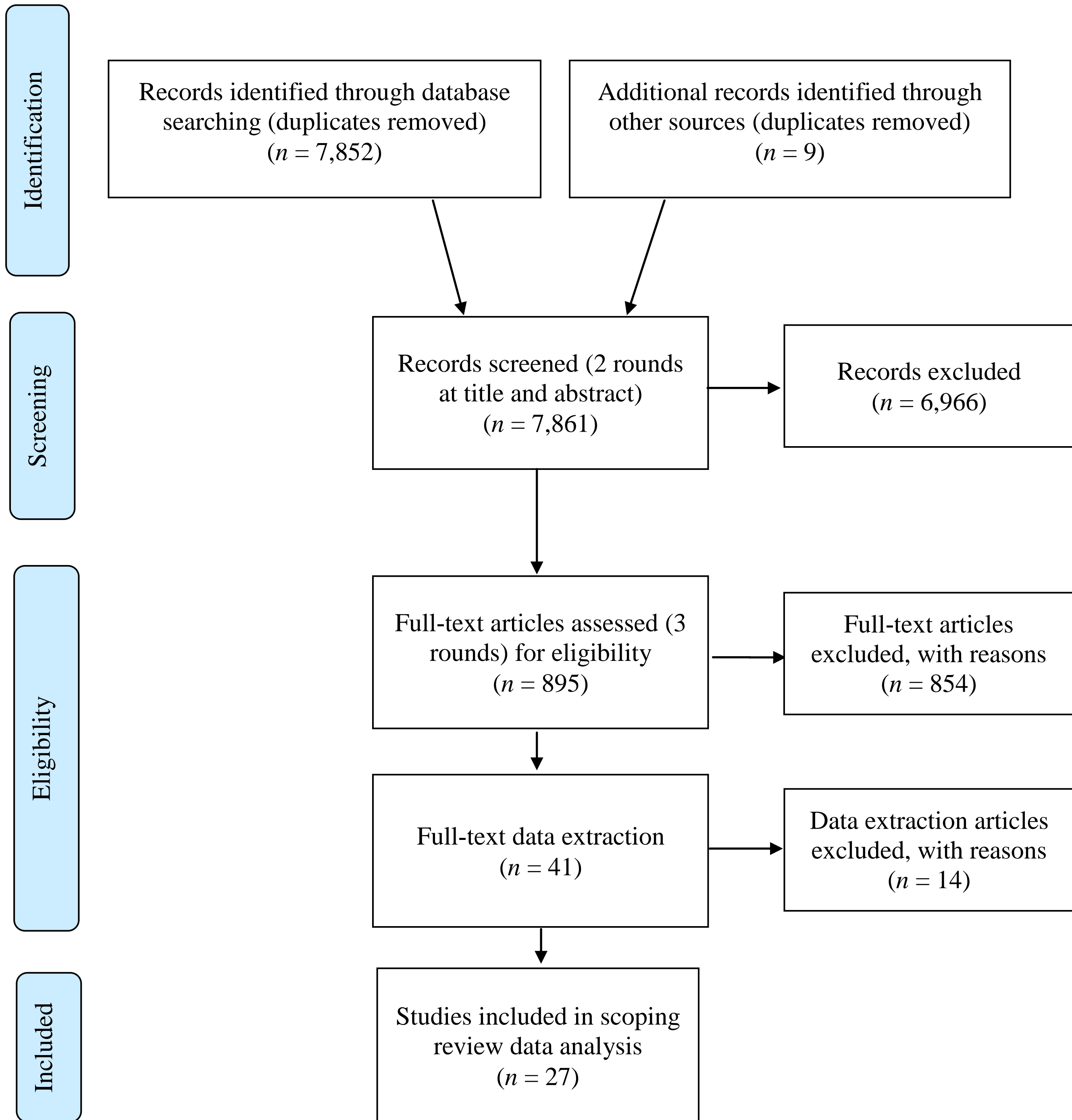
Appendix D – Excerpts from Researcher's Journal (photographs)

Sample of notes and decisions taken and used over the life of the scoping review:





Appendix E – PRISMA Flow Diagram for Screening Process



Adapted from "Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement," by D. Moher, A. Liberati, J. Tetzlaff, D. G. Altman, and PRISMA Group, 2009, *Annals of Internal Medicine, 151*, 264-269.

Appendix F – Application for Behavioural Research Ethics Review

For administrative use only	
File Number:	Date received:

Application for Behavioural Research Ethics Review

Evaluating Applications

The matters of greatest concern to the Behavioural Research Ethics Board (Beh-REB) are the issues of informed consent of participants, voluntary participation, protection of individual privacy (confidentiality and anonymity), and safeguarding participants from any harmful results due to participation or non-participation in the proposed investigation or research project. Our evaluation of an application is based on the degree to which each of these concerns are satisfied; when filling out the application, researchers are urged to consider these points, and to explain to the Beh-REB the steps they will take to address the concerns. Researchers are also urged to consult the Tri-Council Policy Statement 2 for more information and guidance.

The Beh-REB acknowledges the variety of paradigms and methodologies currently available to researchers, and that each of these paradigms entails its own particular ethical issues. Thus, there may be more than one way to address an ethical issue. Researchers should feel free to suggest alternative approaches or to explain why a particular requirement is not appropriate in the context of a given project.

All text boxes will expand once <Enter> is selected or the cursor moves to the next section.

PART 1: IDENTIFICATION	
1.1	**Project Title** GN 1.1 Public Health Leadership to Advance Health Equity: A Scoping Review of the Literature
1.2	**Principal Investigator** GN 1.2 Full Name: Dr. Pammla Petrucka Mailing Address: 119 4400 - 4th Avenue Regina, SK Email: pammla.petrucka@usask.ca Phone: 306-337-3811 NSID number (U of S faculty only): pmp139
1.3	**University/Institutional Affiliation of Principal Investigator** GN 1.3 Position: Professor Department: College of Nursing Division: Graduate Studies and Research
1.4	If this is a student/graduate/resident project, please provide the following information: GN 1.4 a) Student Name(s) and Student ID or NSID (s): Ruth Claire Betker clb704 b) Supervisor Name: Dr. Pammla Petrucka
1.5	**Project Personnel (include graduates/post graduates/residents):** GN 1.5 Add Personnel Remove Last Full Name: Project Position/Role: University/Institutional Affiliation: Email: Phone:
1.6	**Primary Contact Person for Correspondence (if different than Section 1.2)** GN 1.6 Full Name: Mailing Address: Email: Phone:

Appendix G – Participant Information and Consent Form

College of Nursing
4400 – 4th Avenue, Regina, SK
S4T 0H8
Telephone: (306) 337-3800

PARTICIPANT INFORMATION AND CONSENT

Project Title: Public health leadership to advance health equity: A scoping review

Researcher: Claire Betker, RN, PhD (c), College of Nursing, University of Saskatchewan, rcbetker@gmail.com

Supervisor: Dr. Pammla Petrucka, RN, PhD, College of Nursing, University of Saskatchewan, pammla.petrucka@usask.ca

Purpose and objectives of the research

A scoping review of published research studies on public health leadership to address the social determinants of health and advance health equity is being conducted in order to identify strengths and gaps in the literature and research evidence base.

The research question guiding the scoping review is: What aspects of public health leadership to advance health equity have been considered by research?

Objectives for the scoping review are to: 1) identify the extent, range and nature of research studies examining public health leadership to advance health equity; and thereby identify strengths and gaps; 2) identify, compare and contrast the research questions asked, methods used and theoretical frameworks that guide the investigation of public health leadership; 3) gain an understanding of the aspects and description of public health leadership at the individual, organizational and systems level; and 4) identify tools, strategies and mechanisms used to support leadership in public health to advance health equity.

The scoping review will contribute to an increased understanding of how public health leadership can be developed, and supported at a variety of levels.

Method and design

The scoping review used the framework identified by Arksey and O'Malley (2005) to identify and map research activity on public health leadership to address the social determinants of health and advance health equity. This form of synthesis is particularly well suited to explore a heterogenous body of research studies that are principally qualitative in nature and are made up of multiple and contrasting research methods. A scoping review employs similar rigour as

required of all primary and secondary research. The framework developed by Arksey and O'Malley (2005) was used and includes a six phase process: 1) identify initial research question that needs to be answered; 2) identify relevant studies; 3) develop a search method to select studies including inclusion and exclusion criteria; 4) chart or map the data; 5) collate, summarize and report the findings; and 6) validate findings through key stakeholder consultation.
The final phase, to validate or refute the findings will be accomplished through a brief on-line survey of 4-8 senior Canadian public health leaders.

Funding *None*

Potential Risks
No risks to participation are foreseen. If you have concerns, arrangements can be made to discuss with the researcher.

Potential Benefits
If you choose to participate in this study, no direct benefits to you are anticipated. It is hoped the information gained from this study can be used in the future to benefit others.

Confidentiality
Your confidentiality will be protected with no identifying information being used. The data will be reported in an aggregated form, so that it will not be possible to identify individuals. However, we may report quotations from the survey and because the participants for this study have been selected from a small group of people, some of whom could be known to each other, it may be possible that you are identifiable to other people on the basis of what you say.

The information gathered in the online survey will be stored safely and access will be password protected so that no one other than the researcher and her supervisor will see it. All of the information collected in this study including will be securely stored on the researcher's password protected and encrypted hard drives. After the study, the information will be kept for five years and then will be destroyed.

Right to Withdraw
Your participation is voluntary. Please answer only those questions that you are comfortable with. You may withdraw from the online survey for any reason and at any time without explanation or penalty of any sort.

Follow up

- To obtain final results of the scoping study, please contact Claire Betker at rcbetker@gmail.com

Questions or Concerns

- Contact the researcher at rcbetker@gmail.com
- This research project has been approved on ethical grounds by the University of Saskatchewan Research Ethics Board. Any questions regarding your rights as a participant may be addressed to that committee through the Research Ethics Office at ethics.office@usask.ca or call toll free (888) 966-2975.

Consent
Completion of the online survey implies consent to participate.

Appendix H – Ethics Review Exemption Letter

To: Pammla Petrucka
Professor, Nursing
University of Saskatchewan
Cc: Ruth Belker

Date: January 28, 2016

Re: Beh 16-27

Thank you for submitting an application for the study entitled "*Public Health Leadership to Advance Health Equity: A Scoping Review of the Literature*". This survey meets the requirements for exemption status as per **The Tri-Council Policy Statement (TCPS): Ethical Conduct for Research Involving Humans, December 2014, Exemption Article 2.1** states "research may involve interaction with individuals who are not themselves the focus of the research in order to obtain information. For example, one may collect information from authorized personnel to release information or data in the ordinary course of their employment about organizations, policies, procedures, professional practices or statistical reports. Such individuals are **not considered participants** for the purposes of this Policy. This is distinct from situations where individuals are considered participants because they are themselves the focus of the research.

It should be noted that though your project is exempt of ethics review, your project should be conducted in an ethical manner (i.e. in accordance with the information that you submitted). It should also be noted that any deviation from the original methodology and/or research question should be brought to the attention of the Behavioural Research Ethics Board for further review.

Sincerely,

Vivian Ramsden
Chair, Behavioural Research Ethics Board
University of Saskatchewan

nb

Appendix I – Survey Invitation

Date:

To: *(8-10 senior public health leaders in Canada)*

From: Claire Betker RN, MN, PHD(c)

RE: Invitation to participate in online survey to validate or refute findings of a scoping review

Project Title: Public health leadership to advance health equity: A scoping review of the literature

Researcher(s): R Claire Betker, Graduate Student, College of Nursing, University of Saskatchewan, rcbetker@gmail.com

Supervisor: Dr Pammla Petrucka, Professor, College of Nursing, University of Saskatchewan

As part my PHD dissertation, I am inviting you as a senior public health leader in Canada to participate in an online survey. The survey is designed to validate or refute the findings of a scoping review of the literature undertaken to answer the research question: *What aspects of public health leadership to advance health equity have been considered by research?* A summary of the scoping study and the preliminary findings is attached to this email.

Participation in this survey is voluntary, and you can decide not to participate at any time by closing your browser, or choose not to answer any questions you don't feel comfortable with. Survey responses will remain anonymous. Since the survey is anonymous, once it is submitted it cannot be removed.

There are no known risks to participating in this survey; however, as with any online related activity the risk of breach of confidentiality is possible. This survey is hosted by Fluid Survey, a USA owned company, see the following for more information on Fluid Survey Data Privacy in Canada

This research project has been approved on ethical grounds by the University of Saskatchewan Research Ethics Board. Any questions regarding your rights as a participant may be addressed to that committee through the Research Ethics Office ethics.office@usask.ca , (306) 966-2975 or

toll free (888) 966-2975. By completing and submitting the online survey, **your free and informed consent is implied** and indicates that you understand the above conditions of participation in this study.

The survey can be accessed at https://fluidsurveys.usask.ca/s/rcbval/ and will take about 30 minutes to complete. Please complete the survey no later than February 7, 2016.

If you have any questions, please contact me by e-mail at rcbetker@gmail.com

Thank you.

Appendix J – Survey Questionnaire

Introduction to the survey
This survey is designed to validate or refute the findings of a scoping review of the literature undertaken to answer the research question: *What aspects of public health leadership to advance health equity have been considered by research?*

Participation in this survey is voluntary, and you can decide not to participate at any time by closing your browser, or choose not to answer any questions you don't feel comfortable with. Survey responses will remain anonymous. Since the survey is anonymous, once it is submitted it cannot be removed.

There are no known risks to participating in this survey; however, as with any online related activity the risk of breach of confidentiality is possible. This survey is hosted by Fluid Survey, a USA owned company, see the following for more information on Fluid Survey Data Privacy in Canada

This research project has been approved on ethical grounds by the University of Saskatchewan Research Ethics Board. Any questions regarding your rights as a participant may be addressed to that committee through the Research Ethics Office ethics.office@usask.ca (306) 966-2975. Out of town participants may call toll free (888) 966-2975. By completing and submitting this questionnaire, **your free and informed consent is implied** and indicates that you understand the above conditions of participation in this study.

Completion of the survey should take 30 minutes. Please complete the survey no later than February 10, 2016.

Introduction to the survey

Introduction to the survey
This survey is designed to validate or refute the findings of a scoping review of the literature undertaken to answer the research question: *What aspects of public health leadership to advance health equity have been considered by research?*

Participation in this survey is voluntary, and you can decide not to participate at any time by closing your browser, or choose not to answer any questions you don't feel comfortable with. Survey responses will remain anonymous. Since the survey is anonymous, once it is submitted it cannot be removed.

There are no known risks to participating in this survey; however, as with any online related activity the risk of breach of confidentiality is possible. This survey is hosted by Fluid Survey, a

USA owned company, see the following for more information on Fluid Survey Data Privacy in Canada

This research project has been approved on ethical grounds by the University of Saskatchewan Research Ethics Board. Any questions regarding your rights as a participant may be addressed to that committee through the Research Ethics Office ethics.office@usask.ca (306) 966-2975. Out of town participants may call toll free (888) 966-2975. By completing and submitting this questionnaire, **your free and informed consent is implied** and indicates that you understand the above conditions of participation in this study.

Completion of the survey should take 30 minutes. Please complete the survey no later than February 10, 2016.

Demographic information

1. To what public health discipline do you belong?
   - ○ Community/public health medicine
   - ○ Environmental health/inspection
   - ○ Epidemiology
   - ○ Health promotion
   - ○ Public health dentistry
   - ○ Community/public health nursing
   - ○ Public health nutrition
   - ○ Other, please specify... _______________________
2. How long have you worked in public health?
   - ○ 5 – 10 years
   - ○ 11 -15 years
   - ○ 16 – 20 years
   - ○ More than 20 years
3. In what part of Canada do you work?
   - ○ Western - British Columbia/Alberta/Saskatchewan/Manitoba
   - ○ Central – Ontario/Quebec
   - ○ Eastern - New Brunswick/Nova Scotia/Newfoundland and Labrador/Prince Edward Island
   - ○ Northern - Northwest Territories/ Nunavut/Yukon

Background

Objectives of the scoping review

- Identify the extent, range and nature of research studies examining public health leadership to advance health equity, and thereby identify strengths and gaps;
- Identify, compare and contrast the research questions, methods and theoretical frameworks used;
- Gain an understanding of the aspects and description of public health leadership at the individual, organizational and systems level; and
- Identify tools, strategies and mechanisms used to support public health leadership to advance health equity.

Definitions

Health equity is defined as: the "absence of avoidable or remediable differences among populations or groups defined socially, economically, demographically, or geographically" (World Health Organization, 2016).

Health inequities are defined as: health differences that are systematic across a population, socially produced, and considered unfair (Whitehead & Dahlgren, 2006).

Public health leadership is defined as: the ability to influence, motivate, and enable others to contribute toward the effectiveness and success of their community and/or the organization in which they work. It involves inspiring people to craft and achieve a vision and goals, mentoring, coaching and recognition. Public health leaders encourage empowerment, allowing other leaders to emerge (Public Health Agency of Canada, 2010).

Survey to validate or refute findings

The literature identified the following aspects of public health leadership as relevant to advancing health equity: 1) attributes of leaders, 2) relational aspects and 3) knowledge. Please reflect on your personal practice and experience and indicate your level of agreement with each aspect. Your comments on the findings and examples from your practice illustrating these aspects of leadership are welcome.

1.0 Attributes of leaders

1.1 *Visionary, passionate, charismatic, able to inspire and are motivated to be involved.*

Description from the literature set, leaders:

- hold a vision that is coupled with commitment
- use their passion to create and foster empowering strategies

- are persuasive, visible, strategic, inspiring and powerful
- are creative, innovative and work to achieve common goals
- show courage and are fearless
- able to foster change
- act as project champions

1 (totally disagree) 2 (disagree) 3 (neutral score) 4(agree) 5 (totally agree)

Comment and/or example:

1.2 *Trusted, respected and credible.*

Description from the literature set, leaders:

- are reliable, open and trusted in a way not usually possible for professionals
- built trust through high professional caliber
- foster trust between health professionals and community leaders
- are listened to within their organizations
- respect others and act as a role model
- build trust through providing participatory research findings that legitimized intervention

1 (totally disagree) 2 (disagree) 3 (neutral score) 4(agree) 5 (totally agree)

Comment and/or example:

1.3 *Effective communicator.*

Description from the literature set, leaders:

- are able to market a vision and goals
- provide updates, newsletters, and mailings
- express ideas, opinions and beliefs effectively
- engage with the community through active listening

1 (totally disagree) 2 (disagree) 3 (neutral score) 4(agree) 5 (totally agree)

Comment and/or example:

1.4 *Humble, caring and patient.*

Description from the literature set, leaders:

- value human dignity
- are selfless

- show love, caring and concern
- exhibit patience which in turn contributes to actions being well timed, engagement of community members and development of trust in hard to reach communities

1 (totally disagree) 2 (disagree) 3 (neutral score) 4(agree) 5 (totally agree)

Comment and/or example:

1.5 *Values orientation.*

Description from the literature set, leaders:

- work from a value base of solidarity and social justice
- have a disposition, decision making style and ethos that are consistent
- are guided by values and an ethos of service and volunteerism

1 (totally disagree) 2 (disagree) 3 (neutral score) 4(agree) 5 (totally agree)

Comment and/or example:

1.6 *Political and connected with the community*

Description from the literature set, leaders:

- connect organizational mission and resources to the community context
- use political advocacy
- develop plans that accommodated a wide range of public opinions
- have authority within the community and access to local power and resources
- are confident and community driven
- understand the sanctity of community identity and heritage
- understand the importance of neighbourhood stability and family orientation

1 (totally disagree) 2 (disagree) 3 (neutral score) 4(agree) 5 (totally agree)

Comment and/or example:

2.0 Relational aspects

2.1 Leaders are skilled at developing relationships and bring relationships with them. They know who to talk to, and are able to reach out.

1 (totally disagree) 2 (disagree) 3 (neutral score) 4(agree) 5 (totally agree)

Comment and/or example:

2.2. Leaders engage at multiple levels including the political and executive level and are seen as protective, supportive and empowering.

1 (totally disagree) 2 (disagree) 3 (neutral score) 4(agree) 5 (totally agree)

Comment and/or example:

2.3 Leaders are community champions and use/utilize a participatory approach to engage the community and build social capital.

1 (totally disagree) 2 (disagree) 3 (neutral score) 4(agree) 5 (totally agree)

Comment and/or example:

2.4 Leaders work in partnership and collaboration with the community and other organizations and sectors. They build coalitions and 'bridges' between communities, leaders, organizations and other sectors.

1 (totally disagree) 2 (disagree) 3 (neutral score) 4(agree) 5 (totally agree)

Comment and/or example:

2.5 Leaders lead events and activities, and provide support to individuals and staff. They effectively use negotiation and conflict resolution skills.

1 (totally disagree) 2 (disagree) 3 (neutral score) 4(agree) 5 (totally agree)

Comment and/or example:

3.0 Knowledge of the leader

3.1 *Contextual knowledge*

Description:
Leaders have knowledge about the community. Leaders gain knowledge about the community through a community health assessment. Leaders are highly aware and supportive. They raise awareness of issues, engage with the community, and use multiple forms of evidence and knowledge.

1 (totally disagree) 2 (disagree) 3 (neutral score) 4(agree) 5 (totally agree)

Comment and/or example:

3.2 ***Clinical knowledge***

Description:
Leaders who have a clinical background and advanced education were associated with positive differences in community health outcomes.

1 (totally disagree) 2 (disagree) 3 (neutral score) 4(agree) 5 (totally agree)

Comment and/or example:

3.3 ***Situational knowledge (ex. social determinants of health, equity, cultural competence)***

Description:
Leaders are organized and effective managers. Leaders in public health understand and apply the concepts of cultural competence, health equity as well as social and structural determinants of health.

1 (totally disagree) 2 (disagree) 3 (neutral score) 4(agree) 5 (totally agree)

Comment and/or example:

Additional Question

From your perspective, are there any other aspects of leadership to advance health equity that were not covered?

- ☐ No
- ☐ Yes

If yes, please elaborate.

4.0 Tools, strategies and mechanisms to support or develop public health leadership

The following tools, strategies and mechanisms to support or develop public health leadership were described in the literature. Please reflect on your personal practice and experience and indicate your level of agreement with each in terms of their ability to support and/or develop leaders to advance health equity

4.1 ***Policy and program development and implementation***

1 (totally disagree) 2 (disagree) 3 (neutral score) 4(agree) 5 (totally agree)

Comment and/or example:

4.2 ***Accreditation, quality improvement and evaluation***

1 (totally disagree) 2 (disagree) 3 (neutral score) 4(agree) 5 (totally agree)

Comment and/or example:

4.3 ***Workforce and practice development***

1 (totally disagree) 2 (disagree) 3 (neutral score) 4(agree) 5 (totally agree)

Comment and/or example:

4.4 ***Processes, structures and service delivery models that support collaboration, partnership and engagement with communities and other sectors***

1 (totally disagree) 2 (disagree) 3 (neutral score) 4(agree) 5 (totally agree)

Comment and/or example:

4.5 ***Access to and sharing of evidence, research, information about the community and/or population***

1 (totally disagree) 2 (disagree) 3 (neutral score) 4(agree) 5 (totally agree)

Comment and/or example:

4.6 ***Conceptual and theoretical frameworks to guide decision–making and action***

1 (totally disagree) 2 (disagree) 3 (neutral score) 4(agree) 5 (totally agree)

Comment and/or example:

4.7 ***Community-based participatory research (CBPR) as a strategy for capacity building***

1 (totally disagree) 2 (disagree) 3 (neutral score) 4(agree) 5 (totally agree)

Comment and/or example:

4.8 ***Active discussion and discourse about values, ideology and politics***

1 (totally disagree) 2 (disagree) 3 (neutral score) 4(agree) 5 (totally agree)

Comment and/or example:

Additional Question

Are there any other tools, strategies or mechanisms you use to support or develop public health leadership to address the social determinants of health and advance health equity?

- ☐ No
- ☐ Yes

If yes, please elaborate.

General comments

Thank you for taking the time to compete the survey!
If you would like a copy of the final report of this scoping study please email Claire Betker at rcbetker@gmail.com

Appendix K – Survey Attachment: Summary of Scoping Review

Public health leadership to advance health equity: A scoping review of the research literature

Summary of the study and the preliminary findings
January 29, 2016

Background

Health inequities are health differences that are systematic across a population, socially produced, and considered unfair (Whitehead & Dahlgren, 2006). Health equity is defined as the "the absence of avoidable or remediable differences among populations or groups defined socially, economically, demographically, or geographically" (World Health Organization, 2016). Taking action to address the social determinants of health that are responsible the majority health inequities that exist between and within countries is considered a key approach to advancing health equity (WHO CSDH, 2008b). Health inequities are a pressing public health issue locally, nationally and globally (Solar & Irwin, 2010), and addressing these inequities is a matter of social justice (WHO CSDH, 2008b).

Public health leadership is described as "the ability of an individual to influence, motivate, and enable others to contribute toward the effectiveness and success of their community and/or the organization in which they work. It involves inspiring people to craft and achieve a vision and goals. Leaders provide mentoring, coaching and recognition. They encourage empowerment, allowing other leaders to emerge" (PHAC, 2010). However, while there is significant agreement that public health leadership is a priority area, there is little consensus or evidence about: effective public health leadership practices, factors that support or limit it, or expected impact and outcomes. A systematic review of what literature is available was not found. Thus a scoping review of the literature was undertaken with the aim to scope the published research studies on public health leadership to address the social determinants of health and advance health equity in order to identify strengths and gaps in the literature and research evidence base.

Research question

The research question that guided the scoping study was: *What aspects of public health leadership to advance health equity have been considered by research?*

Objectives

The objectives for the scoping review were to:

1. identify the extent, range and nature of research studies examining public health leadership to advance health equity, and thereby identify strengths and gaps;
2. identify, compare and contrast the research questions, methods and theoretical frameworks used;
3. gain an understanding of the aspects and description of public health leadership at the individual, organizational and systems level; and
4. identify tools, strategies and mechanisms used to support public health leadership to advance health equity.

Research design and data sources

A scoping review "involves the synthesis and analysis of a wide range of research and non-research material to provide greater conceptual clarity about a specific topic or field of evidence" (Davis, Drey, and Gould, 2009, p. 1386). A scoping review or study is useful to identify key concepts, gaps in the research as well as the types and sources of evidence available to inform practice, policymaking, and research in a particular topic or research area (Daudt et al., 2013). Scoping studies are systematic in nature and use similar steps to systemic reviews.

The scoping review methodology is relevant for use with an emerging and diverse evidence and knowledge base and is undertaken for four main reasons including: examine the extent, range and nature of research activity; summarize and disseminate research findings; identify research gaps in the existing literature, and; to ascertain whether to undertake a full systematic review (Arksey and O'Malley, 2005).

While a scoping study is iterative, conceptual and interpretive, traditional systematic review methods were used to conduct a comprehensive search and retrieval of the published literature on public health leadership. Nine electronic databases were searched including: Medline, EMBASE, PsycINFO, Cochrane Central, CINAHL, Social Science Abstracts, Applied Social Science Index and Abstracts, Campbell Collaboration, and Business Source Complete. A search for and retrieval of potentially relevant grey literature was also conducted using rigorous, accepted methods.The initial search, in 2012, located 5,546 potentially relevant articles, including primary studies and literature reviews. The search of peer reviewed and grey literature was updated in October 2013 and again in July 2014 and after duplicates were removed, a total

of 6,916 potentially relevant articles were imported into specialized review software (Distiller SR™). Following five rounds of review 26 articles were identified as eligible for inclusion in the scoping study. Data were extracted from the 26 studies using a form developed for this purpose in DistillerSR™. Data were mapped to three analysis questions that were posed to guide data collation and analysis.

1. What research question, designs and theoretical frameworks are used to understand public health leadership to advance health equity?
2. What aspects of leadership are present in this literature set?
3. What tools, strategies or mechanisms are used to support or develop public health leadership to advance health equity?

Findings

For this validation phase findings that emerged in answer to questions two and three above will be shared in an online survey and senior public health leaders will be asked to indicate their level of agreement from their practice and experience. The survey will contain an opportunity for the senior public health leaders to reflect on their experience and identify any gaps that they perceive in the findings as well as provide comments and/or examples.

Aspects of leadership

Aspects of leadership described in this literature set fall into three major categories: attributes of the leader (23 studies), relational aspects (21 studies), and knowledge (13 studies).

1.0 Attributes of the leader – described in 23 (89%) studies

Attribute	Description from the literature set, leaders:
1.1 Visionary, passionate, charismatic, able to inspire and are motivated to be involved.	• hold a vision that is coupled with commitment • use their passion to create and foster empowering strategies • are persuasive, visible, strategic, inspiring and powerful • are creative, innovative and work to achieve common goals • show courage and are fearless • able to foster change • act as project champions
1.2 Trusted, respected and credible.	• are reliable, open and trusted in a way not usually possible for professionals • built trust through high professional caliber • foster trust between health professionals and community leaders • are listened to within their organizations • respect others and act as a role model

	• build trust through providing participatory research findings that legitimized intervention
1.3 Effective communicator.	• are able to market a vision and goals • provide updates, newsletters, and mailings • express ideas, opinions and beliefs effectively • engage with the community through active listening
Humble, caring and patient.	• value human dignity • are selfless • show love, caring and concern • exhibit patience which in turn contributes to actions being well timed, engagement of community members and development of trust in hard to reach communities
Values orientation.	• work from a value base of solidarity and social justice • have a disposition, decision making style and ethos that are consistent • are guided by values and an ethos of service and volunteerism
Political and connected with the community.	• connect organizational mission and resources to the community context • use political advocacy • develop plans that accommodated a wide range of public opinions • have authority within the community and access to local power and resources • are confident and community driven • understand the sanctity of community identity and heritage • understand the importance of neighbourhood stability and family orientation

2.0 Relational aspects – described in 21 (81%) studies

1. Leaders are skilled at developing relationships and bring relationships with them. They know who to talk to and are able to reach out.
2. Leaders engage at multiple levels including the political and executive level and are seen as protective, supportive and empowering.
3. Leaders are community champions and use/utilize a participatory approach to engage the community and build social capital.
4. Leaders work in partnership and collaboration with the community and other organizations and sectors. They build coalitions and 'bridges' between communities, leaders, organizations and other sectors.
5. Leaders lead events and activities, and provide support to individuals and staff. They effectively use negotiation and conflict resolution skills.

3.0 Knowledge of the leader – described in 13 (50%) studies

Knowledge	Description
Contextual	Leaders have knowledge about the community. Leaders gain knowledge

knowledge	about the community through a community health assessment. Leaders are highly aware and supportive. They raise awareness of issues, engage with the community, and use multiple forms of evidence and knowledge.
Clinical knowledge	Leaders who have a clinical background and advanced education were associated with positive differences in community health outcomes.
Situational knowledge	Leaders are organized and effective managers. Leaders in public health understand and apply the concepts of cultural competence, health equity as well as social and structural determinants of health.

Tools, strategies or mechanisms to support or develop public health leadership

The following tools, strategies and mechanisms to support or develop public health leadership were described in 19 (73%) studies in the literature set.

1. Policy and program development and implementation
2. Accreditation, quality improvement and evaluation
3. Workforce and practice development
4. Processes, structures and service delivery models that support collaboration, partnership and engagement with communities and other sectors
5. Access to and sharing of evidence, research, information about the community and/or population
6. Conceptual and theoretical frameworks that guide decision–making and action
7. Community-based participatory research CBPR as a strategy for capacity building
8. Active discussion and discourse about values, ideology and politics

References

Arksey, H. & O'Malley, L. (2005). Scoping studies: Towards a methodological framework. *International Journal of Social Research Methodology: Theory & Practice, 8*(1), 19–32.

Daudt, H. M., Van Mossel, C., & Scott, S. J. (2013). Enhancing the scoping study methodology: a large, inter-professional team's experience with Arksey and O'Malley's framework. *BMC Medical Research Methodology*,*13*(1), 48.

Davis, K., Drey, N., & Gould, D. (2009). What are scoping studies? A review of the nursing literature. *International journal of nursing studies*, *46*(10), 1386-1400.

Public Health Agency of Canada (PHAC). (2010). Glossary of Terms. Retrieved from: http://www.phac-aspc.gc.ca/php-psp/ccph-cesp/glos-eng.php

Whitehead, M., & Dahlgren, G. (2006). Concepts and principles for tackling social inequities in health: Levelling up Part 1. *World Health Organization: Studies on social and economic determinants of population health*, *2*.

World Health Organization Commission on the Social Determinants of Health. (2008). *Closing the gap in a generation: Health equity through action on the social determinants of health*. Geneva: WHO.

World Health Organization, (2016). Glossary. Retrieved from: http://www.who.int/trade/glossary/story024/en/

Appendix L – Template for Data Extraction

Distiller questions	Answer
Refid – 1	75 Gilbert et al Abstract - This study seeks to examine the process of building the capacity to address health disparities in several urban African American neighborhoods. An inter-organizational network consisting of a research university, community members, community organizations, media partners, and foundations was formed to develop a community-based intervention designed to provide health promotion and disease prevention strategies for type 2 diabetes and hypertension. In-depth qualitative interviews (n = 18) with foundation executives and project directors, civic organization leadership, community leaders, county epidemiologist, and university partners were conducted. Our study contextualizes a process to build a public health partnership using cultural, community, organizational, and societal factors necessary to address health disparities. Results showed 5 important factors to build organizational capacity: leadership, institutional commitment, trust, credibility, and inter-organizational networks. These factors reflected other important organizational and community capacity indicators such as: community context, organizational policies, practices and structures, and the establishment of new commitments and partnerships important to comprehensively address urban health disparities. Understanding these factors to address African American health disparities will provide lessons learned for health educators, researchers, practitioners, foundations, and communities interested in building and sustaining capacity efforts through the design, implementation, and maintenance of a community-based health promotion intervention
Year of publication	2011
Location of study	United States
What is the setting of the study? (ex. rural, urban, organizational, local, regional, national, multisite)	Urban
Research questions	Purpose: "to examine the process of building the capacity to address health disparities in several urban African American neighborhoods"(p. 77) Aims: to discuss the importance of health partnerships in eliminating health disparities in one urban center" (p.80) 1. understand an inter-organizational approach to minority health disparities 2. assess the function of the center for Minority Health's partnership to address health disparities and 3. understand how organizational capacity was built in an urban context

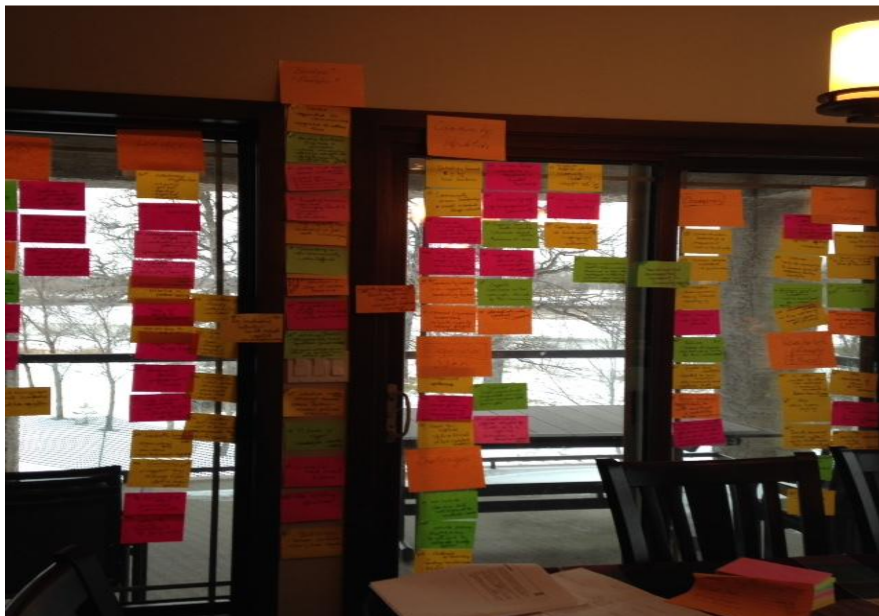
Was equity a consideration in the research questions?	yes
Study design or method	qualitative case study
Describe the design and method	Interviewed 18 participants from non-profit organizations, government, academic and civic institutions.
Was equity a consideration in the design of the study?	no
Is this study about leadership development?	no
Is this study about the impact of public health leadership?	yes
What is the intervention of this study?	Partnership - partnerships of the Center for Minority Health at University of Pittsburgh Grad School of Public Health (since 1994)
What is the intervention group of this study?	Organization - partnerships - academic researchers, county health dept, non-profit and community based organizations (8 of them)
What is the theoretical or conceptual framework used to guide the study or the program/intervention being reported on?	none
How is leadership described? (Including attributes, characteristics and direct definition if available)	Trusted, relational, credible
How is leadership developed?	Experience, organizational environment, other leaders, positional - director
Does this study report outcomes related to leadership?	Yes
How are the outcomes of leadership described?	health measures/status, capacity building, organizational change, intersectoral collaboration (networks)
How is equity (disparity, inequality) described?	access to health care, health status - morbidity and mortality
What is the role (leadership) of public health practitioners and/or organizations?	analyze and report (epi data), partnership and collaboration
Other comments	Article is difficult to follow - logic not always clear.

How is leadership described?	**Relationship to outcome?**	**Leadership Role/function?**
• 5 important factors to build organizational capacity: leadership, institutional commitment, trust, credibility, and inter-organizational networks. • The results of this study are organized according to five major themes in the organizational literature: institutional commitment and leadership, trust and	Literature indicated that inter organizational networks in Public Health shape organizational cultures - enabling multiple organizations to become leaders - foster internal and external collaboration, build cooperative goals across organizations, and build trust to achieve a common vision (p. 78)	Administrative leadership Enabling leadership

credibility, and inter-organizational networks. • Describes a process by which the Center and its partners collaborated to address minority health disparities that shaped a movement within the city leading to the creation of the Healthy Black Family Project – a health promotion and disease prevention of type 2 diabetes program. • P. 85 "The Center director places his role into context by stating, ''the endowed professorship was a demonstration of institutional commitment . . . an important part of putting the leadership platform in place.''" • P. 85 "As the Center's programming grew new partnerships were formed with several foundations in the city and with other community-based organizations. • Funder's Forum for Health Disparities – a strategy to "sustain a city-wide movement to address disparities" p. 85 was led by a project director of one of the community foundations: "The leadership of foundation leaders was cultivated and shaped to address minority health and health disparities by one foundation project director, by starting a Funder's Forum for Health Disparities. The Funder's Forum increased the awareness of the issues concerning minority communities, namely African American communities in Pittsburgh to foundations." • one foundation institutionalized their interest in health disparities by making it a strategic goal of the foundation: "Health Disparities and Health Outcomes [became] a niche for the foundation which meant the foundation would invest in that area for the short coming future. This came out of a value that for philanthropy to make a difference it is less efficacious to make one grant here and one grant somewhere else . . . you make grants sequentially . . . to observe some improvements." (p. 85 – 86)	P. 90 building organizational capacity to support the HBFP relied on several key factors: "1. the individual organizations' readiness to respond to important community needs; 2. organizational leadership structures being amenable to change; 3. organizations establishing institutional commitments; 4. the Center's ability to become an organization engaged in transformational change by re-establishing trusting relationships with African American communities and organizations; 5. the ability of the Center to convene a diverse network of stakeholders; 6. understanding Pittsburgh's neighborhood structure to design a culturally relevant intervention; and 7. having a community that was ready to adopt a culturally relevant model of health promotion and disease prevention" (I ADDED THE NUMBERS 1-7).	

• critical "resources are leadership and institutions that have the [capacity to] design culturally tailored and programmatically effective interventions" p. 88 • "Foundations' organizational readiness to change their organizational cultures to support a change in health outcomes for African Americans was exhibited in their leadership, mission and vision. The HBFP exemplifies the long-term institutional commitment of all of the participating organizations to systematically address minority health disparities and to become a collective change agent through both transformational and transactional leadership (Aarons, 2006)" p. 89		

Appendix M – Data Coding Process (photographs)



Appendix N – Studies Included in the Scoping Review

Brief citation	Full citation
Anderson-Lewis et al. (2012)	Anderson-Lewis, C., Cuy Castellanos, D., Byrd, A., Zynda, K., Sample, A., Blakely Reed, V., … Yadrick, K. (2012). Using mixed methods to measure the perception of community capacity in an academic–community partnership for a walking intervention. *Health Promotion Practice*, *13*, 788-796. doi:10.1177/1524839911404230
Bekemeier, et al. (2012)	Bekemeier, B., Grembowski, D., Yang, Y., & Herting, J. R. (2012). Leadership matters: Local health department clinician leaders and their relationship to decreasing health disparities. *Journal of Public Health Management & Practice*, *18*(2), E1-E10. doi:10.1097/PHH.0b013e318242d4fc
Brassolotto et al. (2014)	Brassolotto, J., Raphael, D., & Baldeo, N. (2014). Epistemological barriers to addressing the social determinants of health among public health professionals in Ontario, Canada: A qualitative inquiry. *Critical Public Health*, *24*, 321-336. doi:10.1080/09581596.2013.820256
Brussoni et al. (2012)	Brussoni, M., Olsen, L. L., & Joshi, P. (2012). Aboriginal community-centered injury surveillance: A community-based participatory process evaluation. *Prevention Science*, *13*, 107-117. doi:10.1007/s11121-011-0258-x
Came (2014)	Came, H. (2014). Sites of institutional racism in public health policy making in New Zealand. *Social Science & Medicine*, *106*, 214-220. doi:10.1016/j.socscimed.2014.01.055
Catalani et al. (2012)	Catalani, C. E. C. V., Veneziale, A., Campbell, L., Herbst, S., Butler, B., Springgate, B., & Minkler, M. (2012). Videovoice: Community assessment in post-Katrina New Orleans. *Health Promotion Practice*, *13*, 18-28. doi:10.1177/1524839910369070
Davison et al. (2013)	Davison, C. M., Kahwa, E., Edwards, N., Atkinson, U., Roelofs, S., Hepburn-Brown, C., … MacFarlane, D. (2013). Ethical challenges and opportunities for nurses in HIV and AIDS community-based participatory research in Jamaica. *Journal of Empirical Research on Human Research Ethics*, *8*, 55-67. doi:10.1525/jer.2013.8.1.55
Downing et al. (2005)	Downing, M., Riess, T. H., Vernon, K., Mulia, N., Hollinquest, M., McKnight, C., … Edlin, B. R. (2005). What's community got to do with it? Implementation models of syringe exchange programs. *AIDS Education and Prevention, 17*, 68-78. doi:10.1521/aeap.17.1.68.58688

Brief citation	Full citation
Draper et al. (2009)	Draper, C. E., Kolbe-Alexander, T. L., & Lambert, E. V. (2009). A retrospective evaluation of a community-based physical activity health promotion program. *Journal of Physical Activity & Health*, *6*, 578-588. doi:10.1123/jpah.6.5.578
El Ansari et al. (2009)	El Ansari, W., Oskrochi, R., & Phillips, C. (2009). Engagement and action for health: The contribution of leaders' collaborative skills to partnership success. *International Journal of Environmental Research and Public Health*, *6*, 361-381. doi:10.3390/ijerph6010361
Gilbert et al. (2010)	Gilbert, K. L., Quinn, S. C., Ford, A. F., & Thomas, S. B. (2010). The urban context: A place to eliminate health disparities and build organizational capacity. *Journal of Prevention & Intervention in the Community*, *39*, 77-92. doi:10.1080/10852352.2011.530168
Goodman (2009)	Goodman, R. M. (2009). A construct for building the capacity of community-based initiatives in racial and ethnic communities: A qualitative cross-case analysis. *Journal of Public Health Management and Practice*, *15*(2), E1-E8. doi:10.1097/01.PHH.0000346019
Ingram et al. (2014)	Ingram, M., Schachter, K. A., Sabo, S. J., Reinschmidt, K. M., Gomez, S., De Zapien, J. G., & Carvajal, S. C. (2014). A community health worker intervention to address the social determinants of health through policy change. *The Journal of Primary Prevention*, *35*, 119-123. doi:10.1007/s10935-013-0335-y
Jansson et al. (2011)	Jansson, E., Fosse, E., & Tillgren, P. (2011). National public health policy in a local context—implementation in two Swedish municipalities. *Health Policy*, *103*, 219-227. doi:10.1016/j.healthpol.2011.08.013
Johns (2010)	Johns, S. (2010). Early childhood service development and intersectoral collaboration in rural Australia. *Australian Journal of Primary Health*, *16*, 40-46. doi:10.1071/PY09050
Kaplan et al. (2006)	Kaplan, S. A., Calman, N. S., Golub, M., Ruddock, C., & Billings, J. (2006). The role of faith-based institutions in addressing health disparities: A case study of an initiative in the southwest Bronx. *Journal of Health Care for the Poor and Underserved*, *17*(2 Suppl.), 9-19. doi:10.1353/hpu.2006.0088
Kuiper et al. (2012)	Kuiper, H., Jackson, R. J., Barna, S., & Satariano, W. A. (2012). Local health department leadership strategies for healthy built environments. *Journal of Public Health Management and Practice*, *18*(2), E11-E23. doi:10.1097/PHH.0b013e31822d4c7f

Brief citation	Full citation
Lyons et al. (2013)	Lyons, R. A., Kendrick, D., Towner, E. M. L., Coupland, C., Hayes, M., Christie, N., … Macey, S. (2013). The advocacy for pedestrian safety study: Cluster randomised trial evaluating a political advocacy approach to reduce pedestrian injuries in deprived communities. *PloS One*, *8*(4), e60158. doi:10.1371/journal.pone.0060158
Martin et al. (2007)	Martin, M., Larsen, B. A., Shea, L., Hutchins, D., & Alfaro-Correa, A. (2007). State Diabetes Prevention and Control Program participation in the Health Disparities Collaborative: Evaluating the first 5 years. *Preventing Chronic Disease*, *4*(1), 1-10. Retrieved from http://www.cdc.gov/pcd/index.htm
Nelson et al. (2009)	Nelson, K., Wright, T., Connor, M., Buckley, S., & Cumming, J. (2009). Lessons from eleven primary health care nursing innovations in New Zealand. *International nursing review*, *56*, 292-298. doi:10.1111/j.1466-7657.2008.00702.x
Okal et al. (2013)	Okal, J., Kanya, L., Obare, F., Njuki, R., Abuya, T., Bange, T., … Bellows, B. (2013). An assessment of opportunities and challenges for public sector involvement in the maternal health voucher program in Uganda. *Health Research Policy and Systems*, *11*(38). doi:10.1186/1478-4505-11-38
Ransom et al. (2012)	Ransom, J., Schaff, K., & Kan, L. (2012). Is there an association between local health department organizational and administrative factors and childhood immunization coverage rates? *Journal of Health and Human Services Administration*, *34*, 418-455. Retrieved from http://www.jstor.org/journal/jhealhumaservadm
Sabo et al. (2013)	Sabo, S., Ingram, M., Reinschmidt, K. M., Schachter, K., Jacobs, L., Guernsey de Zapien, J., … Carvajal, S. (2013). Predictors and a framework for fostering community advocacy as a community health worker core function to eliminate health disparities. *American Journal of Public Health*, *103*(7), e67-e73. doi:10.2105/AJPH.2012.301108
Schmidt et al. (2010)	Schmidt, M., Joosen, I., Kunst, A. E., Klazinga, N. S., & Stronks, K. (2010). Generating political priority to tackle health disparities: A case study in the Dutch city of The Hague. *American Journal of Public Health*, *100*(S1), S210-S215. doi:10.2105/AJPH.2009.168526
Vermeer et al. (2015)	Vermeer, A. J. M., Van Assema, P., Hesdahl, B., Harting, J., & De Vries, N. K. (2015). Factors influencing perceived sustainability of Dutch community health programs. *Health Promotion International, 30*, 473-483. doi:10.1093/heapro/dat059

Brief citation	Full citation
Woodall et al. (2012)	Woodall, J., White, J., & South, J. (2012). Improving health and well-being through community health champions: A thematic evaluation of a programme in Yorkshire and Humber. *Perspectives in Public Health*, *133*, 96-103. doi:10.1177/1757913912453669
Yang and Bekemeier (2013)	Yang, Y., & Bekemeier, B. (2013). Using more activities to address health disparities: Local health departments and their "top executives". *Journal of Public Health Management & Practice*, *19*, 153-161. doi:10.1097/PHH.0b013e318252ee41

Appendix O – Summary of Included Studies: Research Questions, Methods, and Design

Brief Citation	Location	Research question or purpose	Method and design
Anderson-Lewis et al. (2012)	United States	To build community capacity to promote health through physical activity and nutrition.	• Mixed methods design: qualitative and quantitative. • Quantitative: questionnaire to assess community capacity perceptions of researchers and staff (*n* =12), community advisory board members (*n* = 10), and volunteer community members (*n* = 17). • Qualitative: focus group-type listening sessions (3) in which responses to the quantitative questionnaire were elaborated further.
Bekemeier, et al. (2012)	United States	To examine whether the type of local health department leader is related to reducing black–white disparities in mortality.	• Quantitative: secondary data analysis. • Linear regression models with an exploratory panel time-series design to investigate changes in health department programs and leadership and how these changes were associated with each other and with changes in black–white mortality disparities between 1993 and 2005.
Brassolotto et al. (2014)	Canada	To examine how differing understandings of the social determinants of health can serve as epistemological barriers to local Public Health Units' activity on the social determinants of health.	• Qualitative: interviews. • Purposive sampling: 2 units publicly active on the social determinants of health, 4 mid-range units, and three seemingly less active units. • Data gathered through 18 interviews in 9 Ontario Public Health Units (9 medical officers of health and 9 lead staff members) and document analysis. • Findings were coded and critically analyzed using the constant comparison method.

Brief Citation	Location	Research question or purpose	Method and design
Brussoni et al. (2012)	Canada	To identify lessons learned regarding implementation of an injury surveillance system that may benefit other communities considering implementation of health surveillance.	• Qualitative: evaluative case study. • Collaborative process evaluation; community-based participatory process evaluation. • Each community collected a minimum of 22 months of injury data and produced community-specific injury reports. • Focus groups (5), interviews (10), and document review. • Qualitative data collection methods were informed by OCAP (Ownership, Control, Access, and Possession) principles.
Came (2014)	New Zealand	To explore critical points within a policy cycle where institutional racism can be identified. To examine how institutional racism manifests in public health policy making and funding practice.	• Part of a wider study. • Mixed methods: qualitative. • Assumes institutional racism exists. Master and counter narratives gathered and analyzed. Storytellers were selected due to their expertise, mana (reputation), and depth of analysis from witnessing Crown practice from various (insider and outsider) vantage points over decades.
Catalani et al. (2012)	United States	To enhance community engagement in health research and practice.	• Qualitative: Community-based participatory research. • Videovoice project initiated by a New Orleans organization established in the wake of Hurricane Katrina to enhance community engagement in health research and practice. • Established a leadership committee to ensure the equitable and efficient running of the project. • 8 community members were recruited, and all 8 joined the partnership, bringing the full videovoice team to 16 (10

Brief Citation	Location	Research question or purpose	Method and design
			community partners, 2 academic partners, 2 filmmaker partners, and 2 additional support staff). • Combination of convenience and purposeful sampling strategy to collect in-depth interviews with community leaders and residents from diverse backgrounds. Community partners recruited participants using their social networks and based on this strategy.
Davison et al. (2013)	Jamaica	To examine and improve the involvement of nurses in policy, and to strengthen nurses' engagement in HIV and AIDS policy. This article reports on three leadership hubs that were established in Jamaica.	• Part of a larger multinational program of research. • Community-based participatory action research methodologies, qualitative and quantitative forms of data collection. • Data collected over a five-year period from 2007-2012. Two main data sources: progress reports and audio-recorded notes and field notes. • Analytic lens of relational public health ethics. • Deliberative dialogue, capacity building, and partnerships.
Downing et al. (2005)	United States	To identify the factors and conditions that facilitated or deterred the adoption of syringe exchange programs.	• Part of a larger study. • Qualitative: case study of 9 sites. • 49 interviews (17 analyzed in this paper) and collection of other archival data such as drug use, HIV prevalence, local HIV prevention plans, and news reports about syringe exchange programs. • Interviews with providers, researchers, policymakers, staff of community-based organizations, and activists. • Grounded theory for data analysis.

Brief Citation	Location	Research question or purpose	Method and design
Draper et al. (2009)	South Africa – Western Cape	To evaluate the "factors associated with the successful implementation of the programs, and challenges experienced during this implementation process." (p. 579)	• Program evaluation using a cross-sectional study design. • Naturalistic observation to clarify the context of the programs and how they operate, structured interviews and focus groups, questionnaires with open-ended questions, and triangulation of the data.
El Ansari et al. (2009)	South Africa	To explore the relationship between leadership skills and 30 factors for success of Community Partnerships (operational, organizational, and partnership factors).	• Part of a wider survey • Quantitative: multisite program evaluation. • Participants (*N* = 668): members of 5 Kellogg-funded community partnerships serving populations ranging between 35,000 and 300,000 in South Africa. • Self-administered questionnaire. • SPSS for statistical analysis: percentage, person correlation matrix, ANOVA, chi-square, and regression analysis.
Gilbert et al. (2010)	United States	"To examine the process of building the capacity to address health disparities in several urban African American neighborhoods." (p. 77)	• Qualitative: case study design. • 18 participant interviews: non-profit organizations, government, academic, and civic institutions.
Goodman (2009)	United States	"What aspects of capacity are most relevant to grassroots public health initiatives spearheaded by local organizations in minority communities?" (p.	• Qualitative: cross-case study. • 8 sites selected: 4 successful (met 80% of goals) and 4 were challenged. • Open-ended interview protocol focused on the successes and challenges faced by each community initiative in trying to

Brief Citation	Location	Research question or purpose	Method and design
		E1)	achieve its goals, analyzed individually and across sites. • Sites were recommended for interviewing by community leaders, and they had established productive working relationships with the research team.
Ingram et al. (2014)	United States	Preliminary results from an intervention to engage community members to pursue public policy that contributes to sustainable health improvements.	• Qualitative: community-based participatory research. • 18-month training of community health workers and their supervisors in 5 sites. • Data collection instruments were determined through a participatory process with partners • Primarily qualitative data: collected systematically across all 5 intervention sites to capture the span of their activities. • Encounter forms (n = 150) to record conversations with community members, groups and local officials.
Jansson et al. (2011)	Sweden	"To investigate the implementation of a national public health policy in two Swedish municipalities." (p. 220) Research questions: 1. What are the contextual steering mechanisms that are practiced in local government? 2. How have local	• Qualitative: exploratory case study at 2 sites. • 18 face-to-face interviews of politicians, municipal executives, and other officials: 8 from Municipality A and 10 from Municipality B. • Analysis of policy and planning documents, financial statements, and minutes of meetings. • An interview guide followed the various steps in the policy process and the principles for health promotion, namely empowerment, participation, an overall perspective, intersectoral working, equality, sustainability, and a multistrategic approach. • Principles of manifest and latent

Brief Citation	Location	Research question or purpose	Method and design
		governments received and reacted to the national public health policy? 3. How have local health policies been formulated and implemented in local governments?	content analysis.
Johns (2010)	Australia	"To explore the factors that influence the development and sustainability of coordinated and collaborative community-based approaches to early childhood development in three Tasmanian rural communities." (p. 41)	• Multiple case study design (Yin). • 3 communities selected to represent as much diversity as possible. Interviews (managers *n* = 46, service providers *n* = 54, and parents *n* = 46), written documentation, and participant observation. Cross-case analysis reported in this paper. • This paper is largely focused on the development phase.
Kaplan et al. (2006)	United States	Describe how the Bronx Health REACH churches have been mobilized. Identify the factors that have facilitated the work of the faith-based initiative, as well as the barriers that have been encountered and lessons learned.	• Part of a larger evaluation of the work of Bronx Health REACH, a coalition of 40 community-based organizations established in 2001. This study focuses on the faith-based component. • Case study. • Evaluation after 5 years used a community-based participatory approach. • Coalition leadership participated in framing the questions, collecting data, and reviewing findings and drafts of the paper. The evaluation

Brief Citation	Location	Research question or purpose	Method and design
			team used a detailed logic model, 2 focus groups, interviews with key participants (*n* = 11), and on-site interviews with site leaders (*n* = 6). • Semi-structured interview protocols to collect data on topics relating to the purpose, structure, role, accomplishments, challenges, and sustainability of the effort.
Kuiper et al. (2012)	United States	To assess whether and how local public health and environment health leaders increase their departments' health-promoting impact on built environment design, and what pitfalls they should avoid.	• Mixed methods: case study and cross-sectional survey. • 2 cross-sectional quantitative surveys. First survey: 159/179 (89%) health officers, health directors, and environmental health directors from all 62 local jurisdictions in California. Second survey: 101 (83%) responded from 53 (85%) public health departments and 47 (76%) environmental health departments. • Data analyzed using quantitative multivariate linear and logistic regression. • Comparative case study: 3 departments, 12 (7 successful and 5 unsuccessful) cases, 36 health and land-use professionals, and 30 key informants. • Content analysis and pattern matching, which related strong and weak leadership practices to outcomes, as well as explanatory case study analysis.
Lyons et al. (2013)	England and Wales	1. To identify areas (electoral wards) represented by local politicians in deprived communities	• Part of a larger study. • Quantitative: cluster randomized controlled trial, multicentre (4). • Mixture of Geographical Information Systems data (collision locations, road safety interventions), telephone interviews, and

Brief Citation	Location	Research question or purpose	Method and design
		with a history of high pedestrian injury rates among vulnerable road users. 2. To develop a package to promote advocacy for implementation of effective pedestrian safety interventions by local politicians. 3. To undertake a cluster randomized controlled trial to test the efficacy of the advocacy package. 4. To explore factors related to the success or failure of the intervention.	questionnaires. • 615 politicians representing intervention and control wards.
Martin et al. (2007)	United States	To examine the impact that diabetes prevention and control program involvement with the Health Disparities Collaborative had on aspects of diabetes care at	• Program evaluation: cross-sectional, formative evaluation. • 36-item questionnaire via Survey Monkey. • Sample $n = 48$ out of 59 invited participants.

Brief Citation	Location	Research question or purpose	Method and design
		Federally Qualified Health Centers.	
Nelson et al. (2009)	New Zealand	To develop and explore the ways new models of nursing practice could help address health inequalities and contribute to primary health care.	• Program evaluation. • Independent evaluation of each site (4) as well as an evaluation of the initiative overall. • Interviews, annual workshops, site visits, and in-depth case studies.
Okal et al. (2013)	Uganda	To explore the potential for inclusion of public sector health facilities in the voucher program.	• Qualitative. • Purposeful sample of 6 district health officers and 4 public hospital medical superintendents within the voucher program districts (all informants had worked in the program a minimum of 2 years). • Open-ended key informant interview guide. • Content analysis identified 5 key themes.
Ransom et al. (2012)	United States	To qualitatively characterize Local Health Department immunization programs and specific organizational factors underlying immunization service delivery performance challenges and successes related to community childhood immunization coverage rates.	• Qualitative: multisite case study. • Compared case study data from numerous sites, pulled out key overlapping themes, and identified which factors tend to cluster in areas with high immunization rates, moderate rates, or persistently low rates. • Visited 17 geographic and demographically diverse Local Health Departments in 10 states to assess their immunization service delivery practice and their impact. • Interviews with 112 immunization staff in focus groups at each site, document analysis, and observation. • Analysis within and across cases; multilevel coding and analysis.

Brief Citation	Location	Research question or purpose	Method and design
Sabo et al. (2013)	United States	To investigate the impact of community health worker advocacy on community engagement to address health disparities.	• Mixed method participatory research approach: qualitative data enhanced quantitative findings. • Online cross-sectional semi-structured survey: collected quantitative and qualitative data from 371 community health workers from 22 states. • Distributed survey to 4 national and 19 state community health worker organizations, and 1 national and 1 regional conference. • Assessed demographics, training, work environment, and leadership qualities on civic, political, and organizational advocacy.
Schmidt et al. (2010)	The Hague, Netherlands	To explore the factors that determine the generation of political priority for tackling health disparities at a local level.	• Prospective, single case study. • Semi-structured face-to-face interviews (22), document reviews, and observations. • Snowball method to identify the key actors (n = 13): councilors, managers, and policymakers. • Axial and selective coding techniques to inductively analyze the interview data, documents, and observational data, following an open approach.
Vermeer et al. (2015)	Netherlands	1. How do the collaborating partners perceive the sustainability of the community programs? 2. Which factors related to (i) context, (ii) leading organization, (iii) leadership,	• Qualitative. • Multisite (5 Dutch neighborhood coalitions) • 31 participants were randomly selected from a list of 61 active partners in the coalitions (i.e., involved in at least one of the phases of the intervention planning and organization). Respondents included 10 community members, 4 civil servants, 3 public health workers, 4 community workers, and 10 other professionals (e.g., school

Brief Citation	Location	Research question or purpose	Method and design
		(iv) coalition, (v) collaborating partners, (vi) intervention, and (vii) outcome are perceived to affect sustainability?	principal). • Data were collected using interviews (semi-structured questionnaire with open-ended questions) • Content analysis using the conceptual framework developed for the research.
Woodall et al. (2012)	United Kingdom	To understand how the Altogether Better projects were contributing to health improvement in disadvantaged communities and to provide robust evidence to inform the development of practice.	• Program evaluation: qualitative approaches. • Involved 7 projects (from a possible 12) that were more "established" in terms of recruiting and training champions and implementing the empowerment model. • Data collected over a three-month period: interviews with project staff and partners; participatory workshops to gather the views of champions. • 29 interviews: mostly conducted face to face, using a semi-structured interview schedule designed to address the aims and objectives of the evaluation. • Form of snowball sampling (or chain sampling). • 2 workshops: interactive and engaging; offering champions training in active listening and a chance to network with each other. • 30 champions participated, varying in terms of age, gender, ethnicity and disability. • Thematic analysis.
Yang and Bekemeier (2013)	United States	What is the association between characteristics of	• Quantitative. • Unit of analysis was the local health department. Sample consisted of 2332 local health departments,

Brief Citation	Location	Research question or purpose	Method and design
		the top executive of the local health department in relation to use of a wide range of activities towards addressing health disparities?	reduced to 2247 after executives in the position for less than 6 months were excluded. • Cross-sectional, 2-level, mixed linear model with secondary local health department data nested within states. National survey data were used, depicting activities conducted by local health departments. • 5 characteristics of the top executives were included in the statistical model: race, educational background, profession, “first position”, and tenure.