A Conceptual Model of Relationships Between Aesthetic Experience, Self-efficacy, and Behaviour Change in Arts-based Health Communication Programs

Jill Sonke

Master of Arts (MA) in Human Services, University of Illinois

Faculty of Arts of Ulster University

Submitted for the degree of Doctor of Philosophy

February 2021

Keywords: arts, aesthetic experience, health communication, health behaviour change, public health

I confirm that the word count of this thesis is less than 100,000 words excluding the title page, contents, acknowledgements, summary or abstract, abbreviations, footnotes, diagrams, maps, illustrations, tables, appendices, and references or bibliography.
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>List of Tables</td>
<td>vii</td>
</tr>
<tr>
<td>Acknowledgements</td>
<td>viii</td>
</tr>
<tr>
<td>Abstract</td>
<td>ix</td>
</tr>
<tr>
<td>List of Figures</td>
<td>x</td>
</tr>
<tr>
<td>List of Abbreviations</td>
<td>xii</td>
</tr>
<tr>
<td>1. Introduction, Literature Review and Aims of the Study</td>
<td>1</td>
</tr>
<tr>
<td>1.1. Context</td>
<td>1</td>
</tr>
<tr>
<td>1.2. Aims and Objectives of the Study</td>
<td>7</td>
</tr>
<tr>
<td>2. Background Literature Review</td>
<td>11</td>
</tr>
<tr>
<td>2.1. Introduction</td>
<td>11</td>
</tr>
<tr>
<td>2.2. Methods</td>
<td>13</td>
</tr>
<tr>
<td>2.2.1. Phases One and Two</td>
<td>13</td>
</tr>
<tr>
<td>2.2.2. Phase Three: Scoping Review</td>
<td>15</td>
</tr>
<tr>
<td>2.2.2.1. Search Strategy and Information Sources</td>
<td>16</td>
</tr>
<tr>
<td>2.2.2.2. Inclusion and Exclusion Criteria</td>
<td>17</td>
</tr>
<tr>
<td>2.2.2.3. Charting the Data and Data Analysis</td>
<td>18</td>
</tr>
<tr>
<td>2.2.2.4. Risk of Selection Bias</td>
<td>20</td>
</tr>
<tr>
<td>2.3. Scoping Review Results</td>
<td>20</td>
</tr>
<tr>
<td>2.3.1. Quantitative Summary</td>
<td>20</td>
</tr>
<tr>
<td>2.3.1.1. Sample Sizes and Populations</td>
<td>21</td>
</tr>
<tr>
<td>2.3.1.2. Study Designs and Purposes</td>
<td>22</td>
</tr>
<tr>
<td>2.3.1.3. Types of Arts Interventions</td>
<td>25</td>
</tr>
<tr>
<td>2.3.1.4. Health Issues Addressed in the Studies</td>
<td>27</td>
</tr>
<tr>
<td>2.3.1.5. Art forms and health issues</td>
<td>28</td>
</tr>
<tr>
<td>2.3.2. Qualitative Summary</td>
<td>29</td>
</tr>
<tr>
<td>2.3.2.1. Evaluation</td>
<td>29</td>
</tr>
<tr>
<td>2.3.2.2. Participatory Research</td>
<td>29</td>
</tr>
<tr>
<td>2.3.2.3. Experimental or Quasi-experimental Design</td>
<td>30</td>
</tr>
<tr>
<td>2.3.2.4. Descriptive Articles</td>
<td>32</td>
</tr>
<tr>
<td>2.3.2.5. Formative Research</td>
<td>32</td>
</tr>
</tbody>
</table>
2.3.2.6. Case Studies, Commentaries, Ethnographies and Reports 33

2.4. Conclusion 33

3. **Research Design and Methods** 35
   3.1. Introduction 35
   3.2. Research Design Principles 35
      3.2.1. Grounded Theory 37
      3.2.2. Mixed Methods 39
      3.2.3. Mixed Methods Grounded Theory 40
   3.3. Research Design 40
   3.4. Data Collection 44
      3.4.1. Theoretical Literature Review 45
      3.4.2. Survey 46
      3.4.3. Focus Groups 48
   3.5. Data Analysis and Integration 49
      3.5.1. Theoretical Literature Review 51
      3.5.2. Survey 51
      3.5.3. Focus Groups 52
      3.5.4. Data Integration 53
   3.6. Ethical Considerations 55
   3.7. Conclusion 57

4. **Study One: Review of the Theoretical Literature** 58
   4.1. Introduction 58
   4.2. Methods 60
      4.2.1. Phase One 61
      4.2.2. Phase Two 61
      4.2.3. Phase Three 62
      4.2.4. Phase Four 63
   4.3. Results 63
      4.3.1. Arts-based Health Communication Context Area 68
      4.3.2. Aesthetic Experience Context Area 70
      4.3.2.1. Embodiment 74
4.3.2.2. Resonance 76
4.3.2.3. Self-transcendence 77

4.3.3. Health Behaviour Change Context Area 79
4.3.3.1. Social Cognitive Theory 80
4.3.3.2. Self-efficacy Theory 82
4.3.3.3. Themes 84

4.4. Conclusion 86

5. Study Two: Survey 89
5.1. Introduction 89

5.2. Methods 90
5.2.1. Study Population 91
5.2.2. Systematic Web Search 91
5.2.2.1. Search Procedures 93
5.2.2.2. Search Terms 95
5.2.2.3. Search Results 95
5.2.3. Survey Administration 97
5.2.4. Data Analysis 100

5.3. Results 101
5.3.1. Demographic and Quantitative Results 101
5.3.2. Content Analysis of Open-ended Questions 106
5.3.2.1. Distinguishing Art from Entertainment in Health Communication Programs 107
5.3.2.2. Perceived Relationships Between the Arts, Self-efficacy, Readiness for Behaviour Change, and Behaviour Change 110
5.3.2.3. Evidence of Associations Between the Arts, Self-efficacy, Readiness for Behaviour Change, and Behaviour Change 110
5.3.2.4. Learning from experience 113
5.3.2.5. Theoretical Foundations, Frameworks, Constructs or Models that Inform the Use of the Arts for Health Communication 115
5.3.2.6. Additional Comments 116
5.3.2.7. Categories and Sub-categories 117
5.4. Conclusion

6. Study Three: Focus Groups

6.1. Introduction

6.2. Methods

6.2.1. Recruitment Methods

6.2.1.1. Inclusion and Exclusion Criteria

6.2.2. Data Collection, Management and Security

6.2.3. Data Analysis

6.2.3.1. Thematic Analysis with Grounded Theory Coding for Themes

6.2.3.2. Context-Mechanism-Outcomes (CMO) Coding

6.2.3.3. Data Integration

6.3. Results

6.3.1. Responses and Participant Information

6.3.2. Thematic Analysis of Single Groups

6.3.2.1. Public Health Professionals

6.3.2.2. Arts Professionals

6.3.2.3. Program Participants

6.3.3. All-group Analysis

6.3.4. Cross Comparisons

6.3.5. Context-Mechanism-Outcomes Analysis

6.3.5.1. CMO1: Self-efficacy

6.3.5.2. CMO2: Intent for Behaviour Change

6.3.5.3. CMO3: Behaviour Change

6.3.5.4. CMO4: Self-efficacy + Intent for Behaviour Change

6.3.5.5. CMO5: Self-efficacy + Behaviour Change

6.3.5.6. Cross Comparisons Across Participant Groups

6.3.6. Data Validation

6.3.6.1. Peer Debriefing

6.3.6.2. Member Checking

6.3.6.3. Reporting of Disconfirming Evidence
List of Tables

Table 2.1 Search Terms for Phase 1 and Phase 2 literature reviews

Table 2.2 Study Designs of the 78 Included Articles (Sonke et al., 2020, p. 4)

Table 2.3 Health Issues

Table 4.1 Search Returns and Seminal/Key Articles Identified

Table 4.2 Theoretical Literature Review Themes

Table 5.1 Thematic Associations with Art and Entertainment

Table 5.2 Theoretical Foundations, Frameworks, Constructs and Models used by Respondents

Table 5.3 Summary of Results: Descriptive Statistics and Constructs

Table 6.1 Descriptors of Programs Represented by Focus Group Participants

Table 6.2 Comparison, Aesthetic Experience

Table 6.3 Comparison, Behaviour Change

Table 6.4 Context Mechanism Outcome Configurations

Table 6.5 Comparison of Mechanisms of Aesthetic Experience in Primary Art Forms

Table 6.6 Frequently-noted Mechanisms of Aesthetic Experience

Table 6.7 Frequently-noted Mechanisms of Aesthetic Experience, Theatre Groups Combined

Table 6.8 Qualitative Themes and Quantitative Constructs

Table 7.1 Joint Display – Linkages

Table 7.2 Joint Display – Corroborating

Table 7.3 Highly Linked and Corroborated Themes and Constructs

Table 7.4 Final Overarching Themes

Table 7.5 Diffraction

Table 7.6 Joint Display for Explaining and Enhancing
Acknowledgements

The research undertaken for this thesis was conducted with support from an Ulster University Vice-Chancellor’s Research Scholarship, ArtPlace America, and the University of Florida College of the Arts.

I extend my deepest gratitude to my supervisors, Dr. Thomas Maguire (Faculty of Arts, Humanities and Social Sciences) and Dr. Karen Casson (School of Nursing) for their generous guidance, expertise, tireless good humour, and encouragement. In addition, I extend gratitude to Dr. Matt Jennings for his guidance in the early stages of my study, to Jenny Lee for her study partnership, friendship and support, to Dr. Virginia Pesata for her wisdom and support, to Dr. Kelley Sams for her partnership on all things Creating Healthy Communities, including the scoping review, to Aaron Colverson for his help with reference checking, proof reading and formatting, and to the members of the University of Florida Center for Arts in Medicine’s Interdisciplinary Research Lab for their partnership in the data coding, and foremost, to those who generously participated in the survey and focus groups. In addition, I am grateful to Dr. John Creswell and Dr. Timothy Guetterman (University of Michigan) for their critiques and guidance in the mixed methods used in this study.

I also want to acknowledge Jamie Hand from ArtPlace America, as well as all those involved in the Creating Healthy Communities: Arts + Public Health in America initiative that I had the pleasure of leading while conducting this research. The work of this initiative, including dialogue with extraordinary thought leaders and change-makers working at the intersections of the arts and public health, was a major component of my learning about what the arts can do in public health. I am very grateful to all of these individuals for questioning and challenging my thinking and for cheering me on throughout the four years in which I engaged in this study.
Abstract

This thesis presents an explanatory sequential mixed methods grounded theory study aimed at examining relationships between aesthetic experience, self-efficacy and health-related behaviour change within arts-based health communication programmes in the United States. The study addressed this aim through two objectives: (a) to investigate and identify potential linkages between aesthetic experience and health-related behaviour change and (b) to develop a conceptual model for informing the design of arts-based health communication programmes.

The study sought to illuminate the tacit understandings and experiences of public health and arts professionals who use the arts and aesthetic experience in such programs, as well as those who participate in them. The study recognized that these tacit understandings exist, but that they have not been brought forward as a theory or model for guiding practice.

The explanatory sequential mixed methods grounded theory study included three iterative stages of data collection and analysis (theoretical literature review, survey, and focus groups), followed by data integration and interpretation. The meta-inferences derived from this study represent the ways in which people who facilitate and participate in arts-based health communication programs think about aesthetic experience and behaviour change in relation to these programs. They also identify and describe perceived linkages between the arts, aesthetic experience, self-efficacy, and health behaviour change in these programs. They suggest that in arts-based health communication programs, aesthetic experiences may have the potential to contribute to self-efficacy and/or behaviour change. The resulting conceptual model offers a framework that can help inform the use of the arts and aesthetic experience in health communication programs and that encourages cross-sector collaboration between the public health and arts sectors in the United States.
List of Figures

**Figure 2.1** Three-phase Literature Review Model

**Figure 2.2** PRISMA Flow Diagram (Moher et al., 2009)

**Figure 2.3** Art Forms Used

**Figure 2.4** Art Forms Used to Address Health Issues

**Figure 3.1** Simple Study Model

**Figure 3.2** Inductive Logic of the Study

**Figure 3.3** Study Design Diagram

**Figure 3.4** Interactive Analysis Model

**Figure 3.5** Data Integration Model, Spiralling

**Figure 4.1** Phases of the Theoretical Literature Review

**Figure 4.2** Relevant Theories and Conceptual Frameworks Reviewed in Phase Two

**Figure 4.3** Phase Three Results: Key Theories Included in the Data Set

**Figure 4.4** Phase Four Results – Themes

**Figure 4.5** Links Between Theories

**Figure 5.1** Prisma Flow Diagram

**Figure 5.2** Professional Roles

**Figure 5.3** Experience with Health Communication Work

**Figure 5.4** Types of Communities in Which Arts-Based Health Communication Takes Place

**Figure 5.5** Primary Objectives of Arts-based Health Communication Programs

**Figure 5.6** Art Forms Used in Health Communication Programs

**Figure 5.7** Reasons for Using the Arts in Health Communication Programs

**Figure 5.8** Sources of Evidence for Associations between the Arts, Self-efficacy, Readiness for Behaviour Change, and Behaviour Change

**Figure 5.9** Domains of Theories, Frameworks and Models Utilized, by Profession
Figure 5.10 Categories and Sub-categories

Figure 6.1 Categories and Sub-categories

Figure 6.2 CMO Codes for All Groups

Figure 6.3 Art Forms Linked to CMO Codes

Figure 6.4 Group Comparisons

Figure 7.1 Joint Display in the Study Design

Figure 7.2 Proposed Conceptual Model: Aesthetic Experience and Behaviour Change in Arts-based Health Communication Programs
## List of Abbreviations

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABHCP</td>
<td>Arts-based Health Communication Program</td>
</tr>
<tr>
<td>AE</td>
<td>Aesthetic Experience</td>
</tr>
<tr>
<td>BC</td>
<td>Behaviour Change</td>
</tr>
<tr>
<td>CBPR</td>
<td>Community-Based Participatory Research</td>
</tr>
<tr>
<td>CDC</td>
<td>Centers for Disease Control and Prevention</td>
</tr>
<tr>
<td>CINAHL</td>
<td>Cumulative Index to Nursing and Allied Health Literature</td>
</tr>
<tr>
<td>CMO</td>
<td>Context-Mechanism-Outcomes</td>
</tr>
<tr>
<td>DACA</td>
<td>Deferred Action for Childhood Arrival</td>
</tr>
<tr>
<td>EE</td>
<td>Entertainment Education</td>
</tr>
<tr>
<td>HCP</td>
<td>Health Communication Program</td>
</tr>
<tr>
<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
</tr>
<tr>
<td>HPV</td>
<td>Human Papiloma Virus</td>
</tr>
<tr>
<td>IBC</td>
<td>Intent for Behaviour Change</td>
</tr>
<tr>
<td>IRB</td>
<td>Institutional Review Board</td>
</tr>
<tr>
<td>JBI</td>
<td>Joanna Briggs Institute</td>
</tr>
<tr>
<td>LA</td>
<td>Los Angeles</td>
</tr>
<tr>
<td>LGBTQ+</td>
<td>Lesbian, Gay, Bisexual, Transexual, Queer</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-Governmental Organization</td>
</tr>
<tr>
<td>PAR</td>
<td>Participatory Action Research</td>
</tr>
<tr>
<td>PICOT</td>
<td>Population, Intervention, Comparator, Outcome, Time</td>
</tr>
<tr>
<td>PROSPERO</td>
<td>Prospective Register of Systematic Reviews</td>
</tr>
<tr>
<td>Qual</td>
<td>Qualitative</td>
</tr>
<tr>
<td>Quan</td>
<td>Quantitative</td>
</tr>
<tr>
<td>SE</td>
<td>Self-Efficacy</td>
</tr>
<tr>
<td>TTM</td>
<td>Transtheoretical Model</td>
</tr>
<tr>
<td>UF</td>
<td>University of Florida</td>
</tr>
</tbody>
</table>
Chapter One: Introduction

1.1 Context

I have been working at the intersections of the arts and health as an artist, educator, administrator and researcher for 26 years. Throughout this time and across each of these roles, I have recognized aesthetic experience as a key ingredient in my own experience with art and in what connects the arts to health. I came to this study with interest in exploring the potential significance of aesthetic experience as a means for enhancing the effectiveness of arts-based health communication programmes in the United States. The impetus for the study came from research I had undertaken in 2014 in Uganda, where the arts have been used as a primary means for health communication since the 1950s.

As I interviewed leaders from Uganda’s Ministry of Health, and numerous public health, health communication and arts organizations that deliver and evaluate arts-based health communication programmes, I heard something I had not expected. The public health professionals, in particular, expressed a strong belief that the level of artistry involved in these programmes was paramount (Sonke et al., 2017). They described artistry as critical to facilitating an experience in which participants could not just understand, but “resonate” deeply with concepts and ideas. For example, they recognized differences between drawings that were highly detailed and accurate figurative representations and those that engaged people as works of art. They recognized that the representations did not affect or impact participants in ways that led to behaviour change like works of art did. This idea seemed to be a wide-spread understanding among these professionals and had resulted in a high level of partnership and knowledge-sharing between arts and public health professionals in Uganda.
I was fascinated with this notion of *resonance*. The ways in which people described this experience of resonance paralleled my understanding of *aesthetic experience*, which will be discussed at length later in this thesis. The importance of this resonance was underscored by the behaviour change outcomes that had been documented in relation to the programmes these professionals were facilitating (Sonke et al., 2017; USAID, 2012; HCP, 2011). Two radio serial dramas, in particular, have shown significant behaviour change impacts at the population level in Uganda (USAID, 2012; HCP, 2011; I-TEC, 2013). These programmes engage highly accomplished artists as scriptwriters, sound engineers, directors, and actors. Both shows combine realism with artistry to engage listeners in highly relevant serial health dramas, supported by other arts modalities, such as comic books and live dramas performed in communities. These programmes are based in the Entertainment Education (EE) approach (Singhal et al., 2003; Singhal & Rogers, 2012), and build on the added notion that artistry and aesthetic experience are key ingredients for facilitating both engagement and behaviour change. While EE recognizes several art forms, theatre in particular, as useful in engaging audiences and communicating health concepts, it stops short of exploring the specific role of aesthetic experience in the utilization of those art forms.

Before beginning my study, I undertook a literature review to clarify the need for the study. This review identified and reviewed previous studies of arts-based health communication programmes. It provided a rationale for the current study by recognizing a significant gap in the literature, particularly concerning the mechanisms of the arts – and aesthetic experience specifically – that contribute to their usefulness in health communication programmes. The review was expanded in an ongoing and iterative manner over three years. This iterative approach allowed not only for the inclusion of new studies but also for the improvement of
search strategies that resulted from my deepening experience with the topic and the literature over time.

Following Hayden (2017) this project accepts that health outcomes, at both the individual and collective levels, depend critically on health-related behaviours (Hayden, 2017). The relationship between health behaviours and health outcomes is well understood and has motivated the development of an array of health behaviour theories that attempt to inform health communication programmes undertaken by public health professionals (Sheeran et al., 2017). While individual-level theories (i.e. the Health Belief Model, the Transtheoretical Model, and the Theory of Reasoned Action) focus on individual cognitive variables such as attitudes and beliefs, they also recognize that individuals act in the context of others (Clark & Janevik, 2014). As a result, health behaviour theories explore and span both individual and collective constructs, and also strive to bridge the divide between behavioural science theory and health communication intervention design (Sheeran et al., 2017).

Since the 1980s, the concept of self-efficacy has received increasing attention in the realm of health behaviour research, and today, is a common construct in health behaviour theories, particularly individual-level theories (see Chapter 4, section 4.3.3.). Albert Bandura’s (1977) seminal work in defining self-efficacy is at the heart of these theories; and his Social Cognitive Theory (originally, and still sometimes referred to as Social Learning Theory) provides an important emphasis on the sociostructural determinants of health that parallel with personal determinants to influence health behaviours (Bandura, 1998). These sociostructural determinants include the social, political and cultural systems within which people live, as well as the approval or disapproval that a person’s behaviours produce among others in these systems (Bandura, 2004). Social Cognitive Theory asserts that “efficacy belief is a major basis of action”
in relation to health behaviours (p. 624). Simply put, if a person has confidence in their ability to undertake actions needed to achieve a particular outcome, and if they believe that the benefits will outweigh the costs, they may be more likely to apply their skills to health decisions and behaviours.

Bandura defines four sources of influence that can be leveraged to develop people’s beliefs in their personal efficacy: mastery experiences, social modelling (or vicarious experiences), social persuasion, and physical and emotional states (Bandura, 2012). These sources, which are notably interactional and experiential, can be observed broadly as strategic building blocks in health communication programmes today.

Health communication, by definition, focuses on making evidence interpretable, persuasive, and actionable (McCormack et al, 2013). In response to recognition of high incidences of disease and death from preventable causes worldwide and the significance of social determinants of health, health communication is coming more into focus as a critical element in addressing health issues and disparities, as well as their social determinants.

By nature, health communication is a social process (Kreps, 1988). Two-way exchange of information is critical to health communication as is a common system of language among those participating in the exchange. This can be optimized by a shared understanding of individual and local cultures, social norms, beliefs, and attitudes, as well as the needs and concerns of the target population (Schiavo, 2013).

Despite advancing understandings around health communication today, health communication interventions are recognized to fall short of meeting their goals, and there is growing evidence to suggest that approaches that are more participant-oriented, community involved, and grounded in local cultural norms are needed (Green & Witte, 2006; Neuhauser et
There is a clear trend away from didactic, passive health education strategies, and toward more experiential, interactional, and narrative-based health communication approaches (Hinyard & Krueter, 2007). There is also a growing emphasis on communication, as a “symbolic exchange of shared meaning”, with the acknowledgement that “communicative acts have both a transmission and a ritualistic component” (Rimal & Lapinski, 2009, p. 247). The ritualistic element recognizes individuals as members of communities and underlines the importance of active engagement within health communication.

The trend toward more interactive health communication approaches also hearkens to the socio-ecological model (also referred to as the social ecological model), which recognizes that individuals exist within a complex interplay between themselves and the social structures and systems in which they live (Bronfenbrenner, 1992). Health interventions are known to be most effective when they target multiple levels of a person’s environment simultaneously, or are both intrapersonal and interpersonal at the same time (Golden & Earp, 2012).

Aligning with this view and with Bandura’s emphasis on modelling and observation of others’ behaviours as an effective means for enhancing self-efficacy and behaviour change, Entertainment Education (EE) has been utilized as a strategy in health communication practices around the world since the 1950s (Singhal et al., 2003). Bandura’s widely accepted theories provide a compelling invitation for more interactive and narrative-based approaches to health communication; and popular entertainment and mass media formats, such as television and radio programmes, have proven to be accessible and effective mechanisms for public health professionals to utilize for increasing knowledge, changing individual behaviour, and shifting social norms (Moyer-Gusé, 2008).
While the arts are commonly utilized within EE-based health communication programmes, there is an absence of consideration in the EE and health communication literature of the roles of art and aesthetic experience in relation to the design and effectiveness of the programmes. Although EE provides an important basis for the application of the arts to health communication, it falls short in recognizing the potential value of the art forms themselves and the potential of aesthetic experience to deepen engagement with programming and with health concepts, and in turn to heighten self-efficacy and behaviour change.

The arts have long been used as a means to educate the public, foster community engagement and social change, and influence the behaviours of targeted populations (Matarasso, 1997; Belfiore & Bennett, 2008; Sonke & Lee, 2015; Dewhurst, 2015). Arts-based health promotion has its roots in traditional cultures where storytelling, drama, and music serve as primary means for enforcing a culture’s belief systems (Sonke & Lee, 2015). The arts illuminate and influence culture, and facilitate understanding of abstract ideas that may be difficult to articulate in conventional language forms (Frank et al., 2015).

For these reasons, the arts serve widely as indigenous forms of communication in many parts of the world. In global south regions, art forms such as drama, music and the visual arts are used to communicate around many issues, including health (Barz & Cohen, 2011; Barz, 2014; Sonke et al., under review; Kuhlmann et al., 2008; USAID, 2012). Within major health crises, such as the 2014-15 Ebola outbreak in West Africa and the current COVID-19 pandemic, the arts have been engaged as an efficient means for rapid and effective health communication and social learning (Sonke & Pesata, 2015).

While the arts are a widely utilized means for health communication in the global south, their applications are under-investigated and inconsistently recognized within the public health
sector in the global north, particularly in the United States. Overall, the theoretical and practical structures that inform effective use of the arts for health communication are not well defined, and the quality of research on the topic is generally poor (Clift, 2012). While several systematic reviews of mass media health communications campaigns that include arts programs have been published, there are no systematic reviews or meta-analyses focused specifically on the arts in health communication (Owusu-Addo & Owusu-Addo, 2014; Naugle & Hornik, 2014; Amaugo et al., 2014). One scoping review, authored as a part of this overarching study by the doctoral researcher, has recently been published (Sonke et al., 2020). While this review identifies and describes 78 articles on this topic, it does not provide an appraisal of the evidence. Additionally, aside from one evidence-based practice model focused on the use of drama for HIV education (the March Approach), there are no evidence-based frameworks for using the arts in health communication.

This literature review, motivated by my experiences in Uganda, identified a clear gap in both the literature and in health communication practice. The review made clear that, while the arts are widely utilized as a means for health communication, a clear evidence-based theoretical or conceptual framework for this utilization is lacking. This lack is underscored by the absence of even a common taxonomy or terminology for arts-based interventions and reporting in health communication. Additionally, research in this area lacks consistent outcome measures, limiting the ability for evidence synthesis and for best practices to be established and adopted.

1.2 Aim and Objectives of the Study

As a consequence of the background literature review, this study expands on the widely utilized notion of Entertainment Education by examining aesthetic experience in the health communication domain. It was motivated by the question, “Can aesthetic experience contribute
to self-efficacy and, in turn, to behaviour change in arts-based health communication programs?”

My primary aim was to examine relationships between aesthetic experience, self-efficacy and health-related behaviour change within arts-based health communication programmes, with an emphasis on aesthetic experience. In addressing this aim, I set the following research objectives:

Objective 1: To investigate and identify potential linkages between aesthetic experience and health-related behaviour change

Objective 2: To develop a conceptual model for informing the design of arts-based health communication programmes in the United States

This study seeks to address the gaps identified above by illuminating the potential for aesthetic experience to be utilized as a means for enhancing the efficacy of health communication programmes. It seeks to illuminate the tacit understandings - the “know-how” accumulated through a combination of formal learning, lived experience, and professional expertise (Connell, et al., 2003; Kothari, et al., 2012) - of the public health and arts professionals who use the arts and aesthetic experience to engage their programme participants more deeply in health information as a means for facilitating positive health behaviour changes. The study recognized that these tacit understandings exist, but that they have not been brought forward as a theory or model for guiding practice. The mixed methods grounded theory approach utilized in the study brings these understandings to light and, from them, offers a conceptual model with the potential to inform practice in arts-based health communication programming.

In undertaking this study, I recognized that human behaviour is not simply a matter of choice, but rather the result of a complex set of circumstances or conditions, such as place, culture, wealth, education, infrastructural resources, and sociopolitical power (Bronfenbrenner, 1992). I also recognized that individual behaviour is influenced by multiple levels of social
influence and socio-cultural norms. While the study examined individual-level data, I maintained a strong point of view that individual-level behaviour change is necessary but insufficient to improve health outcomes at the population level. Rather, population-level health behaviour change and improvements in outcomes are dependent upon changes that result from cultural change in which the entire socio-ecological environment “generates health through a holistic and collaborative frame” (Davies et al., 2014; Sonke et al., 2019, p. 9). The individual is not irrelevant in this. Individual changes contribute to collective change, but individual changes are difficult to accomplish and maintain if they do not fit into a collective frame.

In keeping with the socioecological model, this study recognized that individuals exist in the context of others and, as such, included exploration around both individual and social factors that influence health behaviours (McLeroy, et al., 1988). As the arts-based health communication programmes that the study examined take place in community settings and with groups of people, both the individual and the collective were considered regarding the nature of aesthetic experience and impacts on health behaviours.

Although the impetus for the study came from my experiences in Uganda, for a range of pragmatic and professional reasons, the context for the study undertaken was set as the United States. This choice was driven by the understanding that the social and cultural contexts of both health and the arts vary widely across nationalities. The differences in how the arts are positioned socially and economically, as well as differences in the ways that people engage the arts across diverse cultures, would have added significant complexity to the study. The focus on one single nation allowed the study to focus more on the mechanisms that connect aesthetic experience to behaviour change, without having to account for complex cultural variables.
It is important to note that this study did not seek to establish a causal relationship between aesthetic experience, self-efficacy and behaviour change in health communication programmes. Rather, it sought to identify potential relationships, or linkages, between them. In doing so, it also sought to develop a conceptual model, informed by established behaviour change theory and the lived experiences of those who design, implement and participate in arts-based health communication programmes.

It is also important to note the contributions of members of the University of Florida Center for Arts in Medicine’s Interdisciplinary Research Lab to the study. Student members of this Lab, which I direct, participated in the coding of narrative data from the study’s survey and focus groups. Lab members coded the data independently, as I did myself. I used their coding to consider my own coding, and to temper my subjectivity and the prior understandings that I carried from my research in Uganda. Their coding was not included in the analysis, aside from serving as a point of consideration for my own coding. In addition, I acknowledge the research team members who participated in the scoping review included as a component of the background literature review and cited within the overarching study. I affirm that all of the intellectual work of this study – including the data collection, analysis, and reporting - was carried out by me independently.

The study began with a background literature review. This review, which is presented in Chapter 2, was conducted in three iterative phases that examined previous work focused on the arts in health communication programmes in the United States. The results of this review informed the research methods, which are presented in Chapter 3. The overarching mixed methods grounded theory study’s individual studies (including their specific methods and their
findings) are then presented in chapters 4, 5 and 6, followed by the integrated results in Chapter 7 and conclusions in Chapter 8.
Chapter Two: Background Literature Review

2.1 Introduction

This literature review was conducted to examine previous work focused on the arts in health communication programmes in the United States involving public health professionals, artists, or both working in collaboration. The review was intended to inform and guide the research methods and analyses, rather than to serve as a data set in the overarching mixed methods grounded theory study. The review was conducted in three iterative stages, with the initial two phases carried out systematically in 2016 and 2017. These phases both looked specifically for studies of programmes that focused on behaviour change the outcome of interest.

Phase three was conducted in 2018 as a scoping review of the literature using the question, ‘How have the arts been used to facilitate health communication at a community health level in the United States?’ (Sonke et al., 2020). This review was conducted in parallel with another review exploring how the arts have been used to promote well-being in communities. While conducted in parallel with my role as a doctoral researcher that review was not a part of the doctoral research.

Figure 2.1

Three-phase Literature Review Model
Note: Search Two on the model’s right side is grey to emphasize that this study was not a part of the explanatory sequential mixed methods grounded theory study, as noted above.

As very few relevant articles were identified in the first two phases, the phase three scoping review was broadened from the specific outcome of behaviour change to include studies that included any defined health outcomes. The first two phases of the review were conducted by the doctoral researcher independently, and the final stage was led by the doctoral researcher in collaboration with her research lab at the University of Florida. The methods section below details this collaboration.

The sections below present the methods of the first two phases of the review together, and the methods of the final scoping review, which was published electronically in May of 2020 and in print in January 2021 in the American Journal of Health Promotion (Sonke et al., 2020) (See Appendix A). This approach highlights the evolution of the iterative search. The results of the scoping review are then presented as the culminating results of the search.
2.2 Methods

2.2.1 Phases One and Two

The first two phases of the literature review were conducted 2016 and 2017 using PubMed, Web of Science, and CINAHL, with additional searching for grey literature using Google Scholar, and hand searching of the tables of contents of specific public health and health communication journals, including *Arts & Health*, *Health Communication*, *Health Promotion Practice*, and the *International Journal of Health Communication*. The table of contents searches were used to confirm that relevant articles were retrieved from the database searches and also to allow inclusion of those that were not. A modified PICOT framework (University of York CRD, 2009; Riva et al., 2012) informed the research question and guided the search, with a population (P) of the United States, arts/aesthetic experience as the intervention (I), no comparison (C), behaviour change as the outcome (O), and a time limit (T) of the past five years. The modification was that no comparison was specified.

Given the complex nature of searching health-related literature for “the arts”, a search strategy was developed to include a broad range of art forms and to limit returns such as “antiretroviral therapies (ART)”, “state of the art”, and “assisted reproductive therapy”. The search also used the MeSH term, “health communication”. The strategy built on previous literature searching and evidence synthesis conducted by the doctoral researcher in partnership with librarians, and expanded the doctoral researcher’s ongoing examination of effective search strategies for “the arts” in a health context. As a result, a guidebook for searching health literature for arts interventions was also developed by the doctoral researcher to document confounding terms and to provide consistency in the iterative search process (see Appendix B).

Table 2.1
### Search Terms for Phase 1 and Phase 2 literature reviews

<table>
<thead>
<tr>
<th>Concept: Arts/aesthetic experience</th>
<th>Concept: Health Communication</th>
<th>Concept: Behaviour Change</th>
<th>Concept: Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Separated by ‘OR’ &amp; AND</td>
<td>Separated by ‘OR’ &amp; AND</td>
<td>Separated by ‘OR’ &amp; AND</td>
<td>Separated by OR</td>
</tr>
<tr>
<td>“visual art” OR drawing OR painting OR sculpture OR drama OR poetry OR music OR dance* OR cartoons OR “graphic novel” OR photography OR drama OR murals OR comics OR storytelling OR “art gallery*” OR lyrics OR songs OR artist* OR theatre* OR graphic arts OR “performing art*” OR singing OR graffiti OR hip hop OR “digital arts” OR “creative arts” OR “applied theatre*” OR “aesthetic experience” OR aesthetic OR “arts intervention”</td>
<td>Health communication OR health education OR consumer health information OR health literacy OR entertainment education OR sex education OR public health OR public health practice OR health message* OR mass communication intervention OR educational theatre* OR MeSH: health communication</td>
<td>behaviour* change OR health behaviour* change OR self-efficacy OR advocacy OR OR self-advocacy OR behaviour* OR OR agency OR knowledge; attitude OR intent for behaviour* change OR readiness for behaviour* change</td>
<td>USA OR U.S.A. OR “United States” OR America*</td>
</tr>
</tbody>
</table>

NOT “in theatre*” OR antiretroviral OR assisted reproductive therapy OR visual methods OR infographics OR illustrations OR “social media”
2.2.2 Phase Three: Scoping Review

The scoping review was designed to explore how the arts have been used in health communication in recent years in the United States. The review was intended to: 1) describe the breadth of artistic practices, interventions, and research being conducted at the intersection of the arts and health communication; and 2) identify the desired and observed outcomes of arts-based health communication interventions and the variables measured in arts-based health communication interventions.

As distinct from systematic and other reviews, scoping reviews typically address broad exploratory research questions and do not provide a critique of the evidence (Peters et al., 2015). Rather, they are intended to identify and map a body of evidence and to provide an overview of that research area (Arksey & O’Malley, 2005). Scoping reviews engage systematic searching, screening, and analysis to map key concepts, sources, and types of evidence available in a relatively efficient manner (Peters et al., 2015). Given the nascent state of the arts in health communication literature and the lack of evidence synthesis in this research area, the scoping review was deemed to be a more feasible and useful approach.

The methodological framework of the review was based on the Joanna Briggs Institute’s (JBI) Methodology for JBI Scoping Reviews, which builds on the scoping review framework originally developed by Arksey and O’Malley (2005). The review began with an initial search for existing systematic and scoping reviews or protocols. The search examined BioMed Central Systematic Reviews, Campbell Collaboration Education Group, Cochrane Database of Systematic Reviews, Cochrane Public Health Review Group, JBI Database of Systematic Reviews, Cochrane Database of Systematic Reviews, and others.

---

1 As noted, this review was published in the American Journal of Health Promotion in 2020. While the study is presented here in a somewhat different structure, where necessary, some information is also presented verbatim from the publication.
Reviews and Implementation Reports, and PROSPERO: International Prospective Register of Systematic Reviews. Twelve systematic reviews were identified; however, all were excluded due to lack of focus on the United States or on how the arts, specifically, are used in health communication programmes.

This scoping review was led by the doctoral researcher, along with a team of researchers at the University of Florida. This team included two faculty research scholars and two librarians. Some steps of the search (such as search term testing and title screening) were supported by graduate assistants and members of the doctoral researcher’s lab, the Center for Arts in Medicine Interdisciplinary Research Lab. This scoping review was conducted in parallel with another exploring how the arts have been used to promote well-being in communities. A protocol for the entire project, inclusive of both searches, was developed using the JBI scoping review protocol guidelines (JBI Reviewer’s Manual, pp. 10-15). Registration with the JBI occurred on January 8, 2019, under the title “Engaging the Arts in Health Communication and Well-being: A Scoping Review”. The information below pertains only to the health communication search.

2.2.2.1. Search Strategy and Information Sources

The search strategy was developed iteratively by the research team using the PICOS criteria above. Preliminary testing of the search strategy was undertaken by the two health sciences librarians to inform the selection of databases for searching. Sixteen databases were tested, including Web of Science, 13 EBSCO databases, and two ProQuest databases that focused on either the arts, communication, education, public health, or health. The final search used eight of these databases: Applied Social Sciences Index and Abstracts (ProQuest), Art and Architecture Source (EBSCO), CINAHL (EBSCO), Communication and Mass Media Complete
The following PICOS framework (University of York CRD, 2009) was developed to guide the search:

- **Population (P):** Articles focused on studies and interventions that took place in a non-clinical setting within the 50 United States.

- **Intervention (I):** Interventions that used the arts to communicate about factors that shape health or health-related experiences.

- **Comparator (C):** Not applicable

- **Outcome (O):** Outcomes that pertained to changes in knowledge, beliefs, behaviours, attitudes that appeared to occur after communication between participants and programme implementers. More specifically, these outcomes included evidence of increased knowledge, changed health beliefs, behaviours or attitudes, enhanced risk perception, reduced stigma, improved cultural acceptance, or improved awareness.

- **Study design (S).** A broad variety of study designs, including descriptive articles (i.e. ethnographies, case studies, formative research) and outcomes research that shared empirical or theoretical data about the arts in health communication, were included (Sonke, et al., 2020).

**2.2.2.2. Inclusion and Exclusion Criteria**

The search included articles published between 2014-2018 that presented either: 1) research; 2) practice models informed by outcomes data; or 3) theoretical frames informed by evidence. The search was specifically focused on programmes operating in communities, rather than in healthcare settings. This distinction was important for capturing public health
programmes, rather than healthcare-based patient education programmes or therapeutic arts programmes in hospitals, which were not the focus of the study.

Inclusion criteria:

- Published in the past five years and describes an intervention that occurred within the past 10 years
- The programme or intervention took place outside of a health facility
- A defined arts-based intervention for health communication is described
- Clear outcomes related to health communication are presented

Exclusion criteria:

- The intervention described occurred more than ten years ago
- The intervention occurred outside of the 50 United States
- The intervention took place inside of a health facility
- No defined arts-based intervention for health communication
- No clear outcomes related to health communication

2.2.2.3 Charting the Data and Data Analysis

The search was run by the librarians and results were exported from the databases into EndNote Web. Duplications were removed, and the remaining references were exported into the web-based software platform Covidence (https://www.covidence.org/home) for screening. The research team also hand-searched the following additional web archives and databases: the National Organization for Arts in Health (NOAH), Alliance for the Arts in Research Universities (a2ru), American Art Therapy Association, American Music Therapy Association, the University of Florida Center for Arts in Medicine Research Database, and the National Endowment for the Arts. Additional references were added to Covidence from the hand-search.
Working in blinded pairs in Covidence, research team members completed the article title and abstract screening and full-text reviews. Disagreements were moderated by the doctoral researcher. The Covidence platform was then used for preliminary data extraction, which collected the following information and exported it to Microsoft Excel:

- Author(s)
- Institutions involved in the work presented
- Disciplines of authors and other partners involved
- Title
- Year of publication
- Journal name
- Journal discipline
- Funding sources
- Type of article (i.e. primary study, literature review, commentary)
- Location (state, region, etc.)
- Study population and sample size (if applicable)
- Health topic/issue of focus
- Art forms/type(s)
- Is the intervention arts-only, or does it also use other intervention strategies?
- Outcomes/Impacts
- Instruments used for assessment, including data collection and measurement (if applicable)
- Relevant policy cited (if applicable)
- Theories and models used, if applicable
• Key challenges noted

The results were then analysed qualitatively based on this information by the doctoral researcher and core research team.

Data synthesis was undertaken by the doctoral researcher independently and also by the research team together to ensure consistency of the results. Through independent consideration and the facilitation of dialogue with the research team, the doctoral researcher resolved disagreements (when there was an include/exclude tie in the screening process) and finalized the synthesis. The process involved iteratively and inductively grouping common factors across the studies into key themes and two primary categories, art type and health issues.

2.2.2.4 Risk of Selection Bias

To reduce selection bias on behalf of the doctoral researcher, the two health sciences librarians chose the bibliographic databases and conducted the literature search. To minimize publication bias, eight databases plus grey literature sources were searched. To reduce screening bias, the reviewers were blinded and used standardized screening questions within Covidence’s data extraction tool. Additionally, the inclusion of articles in the review required agreement between two reviewers. Disagreements were arbitrated by the doctoral researcher.

2.3. Scoping Review Results

2.3.1 Quantitative Summary

The scoping review, including databases, grey literature and hand searching, identified 1,633 unique studies. Following title/abstract screening and full-text screening, 78 articles met the inclusion criteria (See Appendix D for a full list of citations for those articles). Data extracted from these 78 articles were analysed quantitatively, as described below.

Figure 2.2
2.3.1.1. Sample Sizes and Populations

Of the 78 articles that met the inclusion criteria, 74 specified populations and sample sizes (four either did not specify or were theoretical studies). The sample sizes of these 74 articles ranged from four to 2,140, with a mean sample size of 178.8 and a median of 63.5. The populations varied widely and were defined primarily by age, race/ethnicity, health condition, or
professional affiliation. See Appendix E for more information about each of the 78 included articles.

2.3.1.2. Study Designs and Purposes

Study designs varied significantly in the 78 included studies. While the majority of articles (78%, n=61) were outcomes studies, 21.8% (n=17) were descriptive articles that presented theoretical models, general programme information, or formative research designed to inform future interventions. Table 1 below shows a break-down of the study designs, and the sections following provide examples from each of the categories of articles.

Table 2.2
Study Designs of the 78 Included Articles (Sonke et al., 2020, p. 4)

<table>
<thead>
<tr>
<th>Study Design</th>
<th>Number (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outcomes research</td>
<td>61 (78.2)</td>
</tr>
<tr>
<td><strong>Evaluation</strong></td>
<td>37 (47.4)</td>
</tr>
<tr>
<td>Community-based Participatory Research (CBPR)</td>
<td>13 (16.7)</td>
</tr>
<tr>
<td>Experimental</td>
<td>8 (10.3)</td>
</tr>
<tr>
<td>Quasi-experimental</td>
<td>3 (3.8)</td>
</tr>
<tr>
<td>Descriptive articles</td>
<td>17 (21.79)</td>
</tr>
<tr>
<td><strong>Formative research</strong></td>
<td>11 (14.1)</td>
</tr>
<tr>
<td>Case studies/commentaries/ethnographies/reports</td>
<td>6 (7.69)</td>
</tr>
</tbody>
</table>

**Outcomes Studies.** The 61 outcomes studies were grouped into four categories, as described below. The studies measured a range of outcomes, using variables such as perceived self-efficacy (Cabassa, 2014), awareness about a given health topic (Cruz-Oliver et al., 2017) or changes in knowledge (Cueva et al., 2017).

**Evaluation Studies.** Thirty-seven evaluation studies were included in the review. Nearly half (n=16) assessed knowledge and/or awareness. Five of the studies assessed programme
satisfaction (among other outcomes); seven measured behaviour change; five measured intent for behaviour change; and four measured improvements in communication through both subjective and objective measures. The goal of increasing knowledge related to a specific health issue was common among the interventions. For example, Eisenberg and colleagues (2016) documented increased knowledge as a result of a graphic novel intervention about emergency communication among adults with limited English proficiency. Similarly, Johnson and colleagues had success with increasing knowledge among 7th graders following a video and drawing programme related to stroke recognition and prevention.

**Community-based Participatory Studies.** Thirteen studies used a community-based participatory study design to collect information. This category included both Participatory Action Research (PAR) and Community-based Participatory Research (CBPR). Nine studies sought to gain a better understanding of a target population and their perceptions of health issues; two sought to inform the development of interventions, and another two sought to influence health behaviours or knowledge. Eight of the articles used PhotoVoice (Wang & Burris, 1997) to guide participants in creating photographs to generate dialogue and illuminate themes.

**Experimental or Quasi-experimental Studies.** Eleven articles shared findings of research that utilized intervention and control groups. Eight were experimental studies. Four measured knowledge, awareness or attitudes; two measured self-efficacy and outcomes expectations; one assessed the specific mechanisms of an intervention; and one measured behaviour change. Among the three quasi-experimental studies, two explored attitudes and one measured self-efficacy. These experimental or quasi-experiment studies explored a wide range of health issues through a range of art forms, such as a storytelling programme to reduce childhood obesity.
(Davis et al., 2017), telenovelas to increase awareness of stress and end-of-life decisions (Cruz-Oliver et al., 2017, and video to increase knowledge about cervical cancer (Murphy et al., 2015).

**Descriptive Studies.** The review included seventeen descriptive studies that shared findings related to how the arts are being used in health communication, but did not specifically focus on measuring the outcomes produced by the intervention. Of the 17 descriptive studies, most (n=14) focused on the development of arts-based interventions, while a few (n=3) focused on the collection of information about a target population, such as needs assessment or information-gathering as an early step in a research plan. These studies measured acceptability and appeal of arts-based interventions (Azevedo & Robinson, 2015; Cates et al., 2018; McGinnis et al., 2014; Willis et al., 2018) or characteristics of successful interventions (Hanna et al., 2015; Hourani et al., 2017; Kowitt, 2015; Literat & Chen, 2014).

**Formative Studies.** Eleven studies were conducted with the goal of developing recommendations for future interventions. Five of these studies focused on interventions related to sexual/reproductive health, and two focused on interventions related to physical activity, diet, and/or obesity. Other articles focused on mental health communication (Hourani et al., 2017), themes related to sexual identities to include in a digital storytelling programme for LGBTQ youth (Fiddian-Greene et al., 2017), values to include in a substance prevention programme (Helm et al., 2015), and the acceptability of a video game designed to foster HPV awareness (Cates et al., 2018). The studies identified factors that can improve interventions, such as characteristics of the art forms used, information that should be included in materials or media, or acceptability of material or media content (Hourani et al., 2017; McGinnis et al., 2014; Helm et al., 2015).
*Commentaries, Ethnographies, and Reports.* The six articles included in this category shared information about programmes that used the arts to draw attention to health issues or behaviours that influence health. Study designs included two case studies, and one ethnography, one phenomenological study, one case study, and one report.

**Purposes.** The articles included in the review presented a wide range of study purposes. Of the descriptive studies, most (n=11) focused on the development of arts-based interventions, while a few (n=3) focused on the collection of information about a target population as needs assessment or as an early information-gathering step in a research plan. Among the outcomes articles, the community-based participatory research articles focused on gathering information to contribute to the development of interventions (n=2), gathering information to better understand a target population and their perceptions of health issues (n=9), and influencing health behaviours and/or knowledge (n=2).

Among the experimental designs, purposes (sometimes more than one in a study) ranged from investigating the specific mechanisms of an intervention (n=1), to assessing self-efficacy and outcomes expectations (n=2), knowledge, awareness or attitudes (n=4), or behaviour change (n=1). Similarly, the quasi-experimental studies explored intent for behaviour change (n=1), attitudes (n=2), knowledge (n=2), self-efficacy (n=1), and awareness (n=1).

Among the 37 evaluation studies, nearly half (n= 16) assessed knowledge and/or awareness, while ten were designed to understand the feasibility or suitability of an assessment instrument or intervention, five assessed programme satisfaction, and others measured behaviour change (n=7), intent for behaviour change (n=5), self-efficacy (n=5), and improvements in communication (n=3). Again, some studies assessed more than one outcome.

### 2.3.1.3 Types of Arts Interventions
The types of art forms used were organized into 14 categories (See Figure # below). Among these 14 categories, the visual arts, inclusive of drawing, painting, quilting and sculpture, but not including photography, were utilized most frequently (n=23). However, the visual arts were utilized most often in combination with other art forms, such as theatre and music. Film/video arts (n=15) and theatre (n=12) were also used very frequently.

Figure 2.3

Art Forms Used

When the art forms used (including those in mixed-arts programmes) were grouped into the three more overarching categories of the visual, performing and literary arts, the performing arts (n=45, 58%) had the highest prevalence, followed by the visual arts (n=36, 46%), and the literary arts (n=18, 23%). Thirty-four percent of these programmes were delivered using media, such as video, television, radio or web-based formats. Additionally, 16.7% (n=13) of the
programmes used mixed arts (more than one art form used) in the intervention. The visual arts category included primarily photography (n=12) and PhotoVoice (n=10) interventions.

2.3.1.4. Health Issues Addressed in the Studies

The articles included in this review focused on 28 different health issues, with a higher prevalence of studies addressing sexual/reproductive health, physical activity/obesity, overall health, and cardiovascular health/diabetes (see Table 2.3 below).

Table 2.3

<table>
<thead>
<tr>
<th>Category</th>
<th>Health Issue</th>
<th>#</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sexual/ reproductive health (n=15)</td>
<td>Sexual health/teen pregnancy</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Cervical cancer/HPV/Gynecologic cancer</td>
<td>4</td>
</tr>
<tr>
<td>Physical activity/obesity/diet (n=11)</td>
<td>Physical activity/obesity/diet</td>
<td>11</td>
</tr>
<tr>
<td>Overall health (n=11)</td>
<td>Overall health</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Oral health</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sleep</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Substance abuse, sexual health, violence</td>
<td>1</td>
</tr>
<tr>
<td>Mental health/suicide prevention (n=6)</td>
<td>Mental health/suicide prevention</td>
<td>6</td>
</tr>
<tr>
<td>Cancer (n=6)</td>
<td>Cancer</td>
<td>6</td>
</tr>
<tr>
<td>Cardiovascular health/diabetes (n=8)</td>
<td>Diabetes</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Cardiovascular health</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Cardiovascular health and diabetes</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Stroke</td>
<td>1</td>
</tr>
<tr>
<td>Other chronic diseases (n=6)</td>
<td>Alzheimer’s/dementia</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Asthma</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Epilepsy</td>
<td>1</td>
</tr>
<tr>
<td>Smoking/substance use (n=4)</td>
<td>Smoking</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Substance use</td>
<td>1</td>
</tr>
<tr>
<td>Health care decisions/responses (n=6)</td>
<td>Emergency response</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Child development</td>
<td>1</td>
</tr>
</tbody>
</table>
### Environmental health (n=5)

<table>
<thead>
<tr>
<th>Health Issue</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>End of life care</td>
<td>1</td>
</tr>
<tr>
<td>Home Health Care</td>
<td>1</td>
</tr>
<tr>
<td>Organ donation</td>
<td>1</td>
</tr>
<tr>
<td>Injury prevention</td>
<td>2</td>
</tr>
<tr>
<td>Housing conditions</td>
<td>1</td>
</tr>
<tr>
<td>Foodborne illness</td>
<td>1</td>
</tr>
<tr>
<td>Rat lung worm disease</td>
<td>1</td>
</tr>
</tbody>
</table>

#### 2.3.1.5. Art forms and Health Issues

The visual arts, including photograph and PhotoVoice, were used across nine of the ten health issue categories. Mixed arts, programmes that used multiple art forms, were nearly as prevalent. Programmes that used mixed arts were commonly focused on topics such as health care decisions, mental health and suicide prevention; and digital arts, theatre and dance were most commonly used to address sexual/reproductive health.

**Figure 2.4**

*Art Forms Used to Address Health Issues*
2.3.2. Qualitative Summary

Results of the qualitative analysis of the articles are presented below and organized by type of research design. Each section provides a narrative review of representative articles.

2.3.2.1. Evaluation

Most (n=37) of the 49 articles included in the outcomes research category were studies conducted with only an intervention group and no control group. Many of these interventions were implemented with the goal of increasing knowledge related to a specific health issue. For example, following a video and drawing programme designed to educate 7th graders about stroke recognition and prevention, Johnson and colleagues (2017) found increases in self-reported knowledge and in the ability of students to disseminate their knowledge to parents and other adults in their communities. Similarly, Eisenberg and colleagues (2016) found changes in knowledge regarding emergency communication among adults with limited English proficiency following participation in a graphic novel intervention.

2.3.2.2. Participatory Research

This category included articles that were described as being grounded in participatory methods such as Participatory Action Research (PAR), Community-based Participatory Research (CBPR), PhotoVoice, participatory photo mapping, or VideoVoice methods. Eight of these studies used PhotoVoice, a framework proposed by Wang and Burris (1997) that guides participants in creating photographs for the purpose of generating dialogue and illuminating relevant themes as a research method.

A common thread among the articles was the pairing of art forms (i.e. photography, video, theatre, or storytelling) with dialogue, or the use of the arts to generate discussion. This approach was commonly used to enable participants to identify assets or challenges. In addition
to producing research findings, these participatory interventions were also described as increasing awareness and acting as intervention methods to improve health knowledge.

For example, Perez and colleagues (2016) examined the mental health concerns of new immigrants through participatory photography, finding that PhotoVoice was an effective means for allowing participants to identify important issues and explore avenues for action. Davis, et al., (2017) used participatory theatre to assess breast cancer knowledge in African American women. Using a pre-post assessment with a six-month follow-up, the study found statistically significant changes in intent to have a mammogram, concerns about mammograms, and perceptions related to cultural myths about mammograms.

Participatory methods were also used to identify health issues and to investigate intervention delivery methods. For example, in a study of digital storytelling as a method for addressing Type 2 diabetes management in Somali and Latinx individuals, Njeru and colleagues (2015) identified themes to inform storytelling programme design and delivery. Warren and colleagues (2015) used PhotoVoice to identify barriers to enrollment in a national childhood development study. Participatory strategies were also used to improve awareness and knowledge of health issues, including knowledge related to the prevention of teen pregnancy (Noone et al., 2014) tobacco use (Pinsker et al., 2017), and asthma management (Yarbrough et al., 2016).

2.3.2.3. Experimental or Quasi-experimental Design

The eleven articles included in this category shared findings of research that involved an intervention group and a control group. Eight of the articles included randomization across comparison groups. These studies focused on a wide range of health issues and art forms. For example, using a randomized mixed-methods design (Davis et al., 2017) studied narrative communication, and storytelling specifically, as a means to reduce childhood obesity in
Mexican-American families. The study explored elements of storytelling as a form of narrative communication, including cultural tailoring, emotional arousal, and narrative preferences, finding that transportation and identification were particularly important elements in effective health communication using storytelling.

In a multi-centre cross-sectional study of a telenovela programme designed to address caregiver stress and end-of-life care decision-making among caregivers, Cruz-Oliver and colleagues (2017) found a high level of satisfaction with the intervention and a significant increase in openness to discussing end of life issues with culturally diverse patients, as well as significant improvements in awareness of health literacy, cultural competency skills, and family caregiver stress. Murphy and colleagues (2015) compared the effectiveness of health information transmission between a fictional narrative film and a more traditional non-narrative. The study found higher levels of impact in knowledge and attitude change among those who watched the narrative film, as well as increased participation in testing for cervical cancer after six months among those who watched the narrative film.

The three quasi-experimental studies presented a diversity of approaches to health communication, reporting findings in similar ways to experimental studies, and focusing mostly on intentions, attitudes, and knowledge.
2.3.2.4 Descriptive Articles

The descriptive articles included in the review shared findings that described how the arts are being used in health communication programmes, but did not specifically focus on measuring health outcomes produced by the intervention. Rather, these studies measured outcome variables such as acceptability and appeal of arts-based interventions (Azevedo & Robinson, 2015; Cates et al., 2018; McGinnis et al., 2014; Willis et al., 2018) or successful intervention characteristics (Hanna et al., 2015; Hourani et al., 2017; Kowitt et al., 2015; Literat & Chen, 2014). These articles included case studies, programme commentaries, ethnographies, programme reports, and formative studies.

2.3.2.5. Formative Research

The other descriptive articles (Cates, 2015; Cates, 2018; Cooper, 2014; Fiddian-Greene et al., 2017; Hamilton et al., 2017; Helm et al., 2015; Hourani et al., 2017; Kowitt et al., 2015; McGinnis et al., 2014; Najib, 2014; Willis et al., 2018) reported findings of studies that were conducted with the goal of developing recommendations for future interventions using the arts for health communication. Five of these articles focused on interventions related to sexual/reproductive health and two focused on interventions related to physical activity, diet, and/or obesity. These formative studies were designed with purposes ranging from the identification or documentation of current health perceptions to the testing of health messages to the examination of message delivery methods. Their findings offered successful intervention characteristics, participant perceptions of the interventions, and opportunities for future programme design.

For example, participants in a health education intervention for prostate cancer (McGinnis et al., 2014) expressed a preference for vibrant images that include multiple ethnicities. Another study identified stressors and specific themes that should be included in a
graphic novel designed to prepare military personnel for mental health challenges in combat zones (Hourani et al., 2017). Helm and colleagues (2015) identified values that should be included in a substance abuse prevention programme, and Cates and colleagues (2018) shared findings related to the acceptability of a video game designed to increase human papillomavirus (HPV) awareness.

2.3.2.6. Case Studies, Commentaries, Ethnographies and Reports

These articles provided overviews of programmes that used the arts to draw attention to health issues or the processes that influence health. For example, Schillinger and Huey’s (2018) case study described spoken word performances crafted by four young people identify and illuminate others around the upstream drivers of diabetes. These performances were video recorded and shared online. Although changes in knowledge related to the dissemination of these videos were not measured, the authors described the methods of the intervention and offered as the study’s outcomes the themes that appeared in the resulting spoken word poems.

Azevedo and Robinson (2015) shared the ethnographic findings of a study that examined the implementation of a dance and education programme aimed at reducing obesity in 7- to 11-year-old low-income Latina girls and their families. The study found that these children and families, who were living in disadvantaged neighbourhoods, consistently participated in the dance programme, and that such programmes can foster both community engagement and positive behaviour changes. Literat and Chen (2014) offered a theoretical reflection on how a hybrid model of entertainment-education can reach at-risk communities with health messages, increasing the reach of these messages through storytelling networks.

2.4. Conclusion
This review provides a broad overview of how the arts have been used in community health communication programmes in the United States, filling a gap in the synthesis of the evidence on this topic. The review suggests that the arts can be useful in health communication programmes designed to address particularly sensitive issues, including sexual and reproductive health. It also suggests that the arts may be useful in programmes that address overall health and physical activity.

In this review, the arts can also be seen as a useful mechanism for gathering information to help health communication programme planners to better understand target populations and their perceptions of health issues. The arts may also be useful in building knowledge and awareness around health issues. This review also recognizes a lack of consistency in practices, affirming the need for evidence syntheses that can assess outcomes, identify replicable best practices, and guide more consistent outcomes measures.

Chapter 3 will set out how the findings of this literature review informed the design of the explanatory sequential mixed methods grounded theory study, and explain the methods chosen to implement it. As will be demonstrated, the research was designed so as to best address the aims and objectives of the research and the gaps in the literature identified here and in Chapter 1.
Chapter Three: Research Design and Methods

3.1 Introduction

In addressing the objectives of the study and its fundamental research question outlined in Chapter One, the challenge was to develop a systematic and rigorous approach to gathering and analysing the insights of both established theory and the lived experiences of those involved in arts-based health communication programs. This chapter will outline the principles that underpinned the approach to the research design. It will then explain the specific approach to the methodology adopted, and explain and justify the choice of specific research methods deployed to both generate and analyse the various forms of data. A key influence at each of these levels has been the 26 years of experience of the doctoral researcher in the domain of the study, shaping the study’s design, the implementation of its methods, and the analysis.

The study utilized an explanatory sequential mixed methods grounded theory design (Creswell & Creswell, 2017). The following sections will detail why and how the explanatory sequential mixed methods grounded theory design was utilized in undertaking the study. It will present the general principles of the research design, the logic that links these principles, and the specific procedures used to generate and analyse the data.

3.2 Research Design Principles

This study used an explanatory sequential mixed methods grounded theory design (Creswell & Creswell, 2017). The study included three iterative stages of data collection and analysis, followed by data integration and interpretation, as shown in Figure 3.1 below.

Figure 3.1

Simple Study Model
This constructivist approach was chosen as a means for garnering an inductive, iterative and comparative process and for integrating and analysing both quantitative and qualitative data sets. A constructivist approach to research assumes that the meaning of experiences and events are constructed by individuals, and therefore people construct the realities in which they participate (Charmaz, 2014). The constructivist approach to grounded theory also allows for the integration of the researcher’s subjectivity and involvement in both constructing and interpreting the data (Charmaz, 2014).

This paradigm also allowed space for the doctoral researcher’s instincts about what might be encountered in the field, as well as an openness to the experiences and views that would be encountered. It allowed the doctoral researcher to develop understanding iteratively, so that theory could emerge from the data generated, rather than being predetermined by any particular grand theory. The iterative nature of grounded theory was particularly important, given the lack
of a methodological precedent for exploring aesthetic experience in relation to health behaviour change.

The choice to engage a mixed methods approach to grounded theory allowed for a broader range of data collection and a more purposeful integration of the data sets. Recognizing that “individuals develop subjective meanings of their experiences” (Creswell & Creswell, 2018, p. 8), the constructivist approach within mixed methods research allowed me to find and consider a broad range of experiences and views on this topic. The mixed methods approach also provided a framework for integrating quantitative and qualitative data in a clear and rigorous manner that allowed for statistical trends found in quantitative data sets to be integrated and compared with the personal narratives and experiences captured in qualitative data sets, along with the theoretical frames and linkages found in the literature. The study applied inductive logic toward the development of a conceptual model related to the potential role of aesthetic experience - as a mechanism - in facilitating behaviour change in arts-based health communication programmes.

The research design applied inductive logic toward the development of the theory, as will be explained in section 3.2.3.1 below. First, a rationale for the selection of the grounded theory mixed methods approach is summarized below. Some background information on grounded theory, mixed methods and grounded theory mixed methods, as an emergent methodology, is presented to clarify this rationale.

3.2.1 Grounded Theory

Grounded theory is the most commonly utilized qualitative research method (Morse, 2009). The method has proven to be highly useful in identifying and describing phenomena. It is especially well-suited to social phenomena, including health-related behaviour. It helps to illuminate not only what is happening or has happened in a particular group of people or
circumstance, but why it is happening. In this way, grounded theory was particularly well suited to the exploration of potential linkages between aesthetic experience and behaviour change in arts-based health communication programs.

Grounded theory produces midrange theory - theory that lies between empirical generalizations framed as hypotheses and grand, unifying theory (Liehr & Smith, 2017; Merton, 1968). Such theory is clearly linked to data, yet is generalizable, and it can be used to guide practices. Grounded theory is a robust methodology that goes beyond documenting events to explaining their meaning through theory that is grounded in data.

Grounded theory is defined by several key components, most notably its iterative process of data collection and analysis (Charmaz, 2014). This process increases the analytic power of research that aims to develop explanatory theoretical frameworks and to ground theory in data, as is the case in this study. Grounded theory is an inductive, iterative inquiry that utilizes methods such as literature review, theoretical sampling, the coding of data, categorization of codes, and comparison of data sets. The iterative nature of the process increases its analytic power.

The constructivist view that underpins grounded theory research emphasizes research as the construction of knowledge while acknowledging that it takes place under specific conditions (Charmaz, 2014). It also emphasizes the researcher and the researcher’s subjectivity in interpreting data as valuable and essential in developing theory. This approach accounts for the researcher’s knowledge, skill, and understanding of theory, as well as his or her unique interpretations, as important ingredients in the analysis. Rigour in the methodology comes from the iterative collection of information and the constant comparison of the data sets (Charmaz & Belgrave, 2007).
For all of these reasons, and because of the lack of published research exploring the connections between aesthetic experience and behaviour change, the constructivist grounded theory approach was deemed to be appropriate for this study. The approach allowed for the doctoral researcher’s experience and subjectivity to be utilized as an asset, and for data to be collected iteratively, which is also particularly useful when the prior evidence base is lacking.

### 3.2.2 Mixed Methods

Mixed methods research allows for statistical trends found in quantitative data sets to be integrated and compared with the personal narratives and experiences captured in qualitative data sets in the exploration of social phenomena (Creswell, 2015). Mixed methods research also allows for a constructivist approach. Recognizing that “individuals develop subjective meanings of their experiences” (Creswell & Creswell, 2018, p. 8), the constructivist approach within mixed methods research allows the researcher to find and consider a range of views.

Open-ended questions and dialogic processes, such as focus groups, are particularly useful in collecting this range of views. Such dialogic processes allow participants to construct meaning from their own experiences. The approach recognizes that such meanings are socially constructed, and built from listening to and interacting with others (Creswell & Creswell, 2018).

In this study, the mixed methods approach allowed for a more complete exploration of the potential linkages between aesthetic experience and behaviour change than either quantitative or qualitative data could have accomplished alone. The study began with a broad survey that allowed results to be generalized to the population of professionals who use the arts in health communication programs, and then collected qualitative data from both professionals and program participants to qualitatively explain and expand upon the quantitative findings.
This approach provided evidence of occurrences (such as skills development or behaviour changes) and then allow for deeper investigation and explanation of those occurrences through personal narratives and dialogic exploration (focus groups). The variation in methods provided a broader and deeper investigation than could have been accomplished with either quantitative or qualitative methods alone, and allowed the lived experiences of participants to form the theory.

3.2.3 Mixed Methods Grounded Theory

Although both mixed methods and grounded theory are commonly used today, the establishment and use of mixed methods grounded theory is relatively new. While both Glaser and Strauss have long suggested that both quantitative and qualitative data can be included in grounded theory research (Charmaz, 2014), the term was not introduced until fairly recently by Johnson et al. (2010). While numerous articles suggest the advantages of pairing or integration of grounded theory and mixed methods approaches (Babchuk, 2015; Birks & Mills, 2015; Walsh, 2015), Guetterman et al. (2019) provide the first procedural guidelines for mixed methods grounded theory. These guidelines were applied in this study.

In mixed methods grounded theory research, theoretical sampling and the iterative nature of grounded theory data collection enhance mixed methods approaches. In this study, this approach allowed for a natural evolution of the study design, data collection, and analysis processes. For example, the initial literature review led to the choice of a national survey as a first data collection method; and the analysis of the survey led to the choice of focus groups as the next stage of data collection.

3.3. Research Design

2 The doctoral researcher received direct guidance on the study design from Dr. Guetterman at two points in the study.
The study applied inductive logic toward the development of a conceptual model related to the potential role of aesthetic experience (as a mechanism) in facilitating behaviour change in the context of arts-based health communication programs. The study utilized a realist evaluation framework to investigate the relationship between arts-based health communication programs (as the context), aesthetic experience (as the mechanism), and various outcomes, as perceived by program facilitators and program participants (Willis et al., 2018; Jackson & Kolla, 2012). The research question and specific aims were derived from the doctoral researcher’s past experience and a review of the literature. The study then proceeded to iteratively collect and analyse data from a survey and focus groups. Figure 1 below presents the inductive logic of the study (Creswell & Creswell, 2018).

**Figure 3.2**

*Inductive Logic of the Study*

![Inductive Logic of the Study](image)

*Note.* This model should be read from the bottom up.

The study did not seek to empirically investigate the effects of aesthetic experience on behaviour change or to test an intervention, but rather to determine potential linkages between the two constructs through the tacit (personal practical) knowledge of professionals, the lived
experiences of program participants and integration of theory obtained from the published literature. Thus, the research employed both quantitative and qualitative data in an inductive and iterative process of data collection and analysis. The emphasis was towards the qualitative aspects. Thus, using Morse’s (1991) system of annotation, the study can be annotated generally as Quan + QUAL. The study utilized a four-phase explanatory sequential mixed methods grounded theory design (Creswell & Creswell, 2018). Following a literature review of arts-based health communication programs, data collection was undertaken through a theoretical literature review, a survey, and seven focus groups. As is shown in the detailed study model in Figure 3.3 below, the themes derived from the theoretical literature review informed the development of the survey instrument. The survey was, in turn, used as a screening instrument for the focus groups and the constructs derived from its analysis informed the development of the focus group discussion guides.

**Figure 3.3**

*Study Design Diagram*
Each iterative data collection method was designed to explain and/or corroborate the previous data, and to advance the development of the grounded theory. The themes and constructs derived from each of these data collection methods and their individual analyses (both qualitative and quantitative), were integrated through spiraling and back-and-forth exchanges. Joint displays were used to distil the final themes and meta-inferences that informed the development of the grounded theory and conceptual model.

The study population consisted of arts, public health and health communication professionals who use the arts in health communication programming, and of individuals who have participated in those programs. This population was chosen as a means for garnering direct lived experience as well as understandings (tacit knowledge) that form the basis for program design among these professionals. As there is a lack of published literature addressing the use of the arts, and aesthetic experience specifically, in health communication programs, the
perspectives of professionals and participants provided critical data for developing the grounded theory.

As was the case in this study, investigations of the specialized knowledge of a specific population can face significant challenges in identifying and quantifying the population, and in accessing its members. There are several non-probability sampling methods designed for such studies, including purposive sampling, snowball sampling, and respondent-driven sampling (See chapter 5, section 5.1 for more information on these methods). While these methods do not provide a means for ensuring representation of a population or for determining sample error or bias, they do provide researchers with a means for systematically obtaining reasonable samples and they can produce excellent quality data (Ruel et al., 2015; Griffith et al., 2016).

This study utilized purposive sampling. This type of sampling calls specifically on people who have specialized knowledge about the subject under investigation, as was the need in this study. The study also utilized snowball sampling, which is often employed when a population is difficult to find, or hidden (Griffith et al., 2016; Ruel et al., 2015). This was the case in this study because there are no professional associations or special interest groups for arts in health communication in the United States to date. In this approach, members of the population identify other members of the population, creating a chain of referral. The process begins with the researchers identifying a small number of the target population and then obtaining referrals from each. The process can continue in waves to expand the sample. Snowball sampling is noted as the most commonly used qualitative research sampling method (Hardon et al., 2004; Griffith et al., 2016), and was used in this study. Sampling methods are discussed in more detail in Chapters 4, 5 and 6.

3.4. Data Collection
In keeping with grounded theory methods, data collection occurred iteratively and sequentially. Data collection methods consisted of a theoretical literature review, a survey and seven focus groups (see Figure 3.3, above). All data were collected and managed by the doctoral researcher. Review and approval for the survey and focus groups were garnered from the University of Florida (UF) Institutional Review Board (IRB) and the Ulster University Faculty of Arts Research Ethics Filter Committee. All data were collected using UF’s Qualtrics interface and stored in Qualtrics and UF’s secure Dropbox system.

The sections below provide a brief overview of each of the data collection methods used in each of the studies involved in the mixed methods grounded theory study (see Figure 3.3 above). Each of these three studies, including their results, is presented in detail in subsequent chapters, as referenced below. Chapter 7 will present the results of the overarching study.

3.4.1. Theoretical Literature Review

This initial step in the data collection process was intended to identify key theories related to each of the context areas of the study – arts-based health communication, aesthetic experience and health behaviour change. This theoretical literature was a critical data set in the mixed methods grounded theory study (Onwuegbuzie & Frels, 2016). It served to: 1) identify existing philosophical assumptions; 2) identify links, if any, previously made between concepts; and 3) develop a set of themes to represent these philosophical assumptions within the data integration phase of the study.

The review was undertaken in four phases (see Chapter 4, Figure 4.1). The first phase included three initial literature searches, conducted through a snowballing approach, to identify key or seminal articles for each context areas (Danglot et al., 2019; Jalali & Wohlin, 2012; Badampudi et al., 2015). In the second phase, review of the articles obtained from the initial
searches led to the identification of theories or conceptual frameworks that are relevant to each of the three context area concepts (arts-based health communication, aesthetic experience and health behaviour change). The articles were examined to identify specific linkages between the three concepts.

In phase three, search strategies were developed for each theory or frame, and searches were carried out systematically, using PubMed, Web of Science, and CINAHL. Additional hand searching was conducted using a backward snowballing approach. This third stage of the review identified a final set of key theories that provided conceptual linkages between arts-based health communication, aesthetic experience and health-related behaviour change. Those without clear linkages were eliminated. In the fourth and final phase of the review, themes were drawn from the literature on each of the theories for use in the data integration phase of the study. The theories identified and themes developed from this data set informed the development of a survey instrument used in the next sequential phase of the study. See chapter 4 for details.

3.4.2. Survey

The second data set was collected through a national survey of public health and health communication professionals who use the arts in their programs and artists who work in public health and health communication programs. The primary aim of the survey was to investigate and identify potential relationships between arts engagement, aesthetic experience, self-efficacy, and health-related behaviour change in arts-based health communication programs from the perspectives of these professionals. Given the emphasis on self-efficacy in the behaviour change literature, self-efficacy was included as a specific area of inquiry in the survey.

A survey was chosen as the first data collection method in order to reach and gather information from as many people as possible who are working in arts-based health
communication programs in the study. The snowballing approach allowed for the survey to be shared from one person to another, and its screening questions ensured that respondents fit the study’s inclusion criteria. This method also allowed for efficient collection of a fairly wide range of information to be collected regarding how and why the arts are used in health communication programs.

The survey’s design was informed by the primary review of literature focused on the arts and health communication, the theories identified in the theoretical literature review, and a review of survey science literature. One previous study that focused on the use of the arts in health communication programs in Uganda, conducted by the doctoral researcher, also influenced the survey design (Sonke et al., 2018). The 18-question survey consisted of 17 closed-ended questions, with six of those also allowing open-ended narrative comments, and one open-ended question. The survey was delivered online using the Qualtrics system, accessed through the University of Florida.

The study population of public health and health communication professionals who use the arts in their programs and artists who work in public health and health communication programs was identified and accessed through a non-probability snowball sampling approach (Griffith et al., 2016; Tyrer & Heyman, 2016; Ruel et al., 2015). An initial population of 214 potential participants was identified through a systematic web search. Within the survey, participants were asked (not required) to provide names of other programs and/or professionals who use the arts in health communication programs. The survey was then sent to those named by respondents.

The survey was pre-tested with 14 individuals who were representative, but not a part, of the target population. These individuals completed the survey and then participated in a focus
group to provide feedback. As a result of the focus group feedback, minor changes were made to the survey instrument. The survey was then piloted with randomly selected members of the target population. Analysis of the responses indicated that no further changes to the survey instrument were needed, and the survey was administered between 6 September and 21 December, 2018.

The survey served as a screening instrument for the focus groups. One question at the end of the survey asked respondents if they would be willing to be contacted about participating in a focus group. From those who responded positively, a list of potential focus group participants was developed.

3.4.3. Focus Groups

The focus group format was chosen to optimize dialogue and to deepen the dialogue beyond what might occur in a one-to-one interview format (Leavy, 2014). The group, or collective, unit of analysis was of particular interest at this stage of the overarching grounded theory research, as it allowed for the tracing of patterns of consensus and dissent, and complemented the individual perspectives collected from the survey.

The primary aim of the focus group study was to investigate and identify potential linkages between arts engagement, aesthetic experience, self-efficacy, and health-related behaviour change in arts-based health communication programs. The study was designed to identify and examine the experiences and understandings of three groups of people who engage in arts-based health communication programs – public health professionals who use the arts for health communication, arts professionals who create or collaborate in public health programs, and participants in arts-based health communication programs.
The focus group script used in this study was developed in consideration of the emphasis on self-efficacy (social cognitive theory) and stages of behaviour change (transtheoretical model) found in the health communication literature (Bandura, 1977; Prochaska & DiClemente, 1986). These two theories, along with current literature on aesthetic experience and validated instruments used to assess self-efficacy and aesthetic experience, also informed the design of the focus group script (Bandura, 2006; Chung et al., 2016; Gruber-Baldini et al., 2017; Luszczynska et al., 2005; Madsen et al., 1993; Schindler et al., 2017; Tröndle et al.; 2014; Stamatopoulou, 2004).

Seven focus groups were conducted in three American cities (New York, New York; Denver, Colorado; Los Angeles, California) between April and December of 2018. Three of the groups comprised public health professionals who use the arts in their health communication programs, two comprised professional artists who work in health communication programs, and two comprised participants in arts-based health communication programs. The groups were audio recorded with the permission of participants and transcribed for analysis.

Data collection procedures for each of the studies summarized above are detailed, respectively, in chapters 4, 5 and 6. The sections below describe the overarching interactive data analysis approach, including the methods undertaken for analysis of each study and the data integration phase and final analysis of the overarching mixed methods grounded theory study. Chapter 7 presents the details of the data integration and final analysis.

3.5 Data Analysis and Integration

Figure 3.4

Interactive Analysis Model
Note: Broken lines indicate where results were used to develop the survey instrument and focus group discussion guides (see Figure 3.3).

Throughout the study, an interactive data analysis approach was used to provide an “iterative, interfacing and rigorous analysis of the qualitative and quantitative data” while the mixed methods grounded theory data collection processes were ongoing (Fetters, 2020). Figure 3.4 above illustrates the interactive and interactive nature of the analysis.

As illustrated in Figure 3.3, findings from each study informed the methods, instruments, and identification of participants for the subsequent studies. In addition, constant comparison was undertaken throughout the grounded theory study, both within and across each data set. This process provided comparisons across the three primary participant groups – arts professionals, public health participants, and program participants.
The sections below provide a brief summary of the analysis methods used for each of the individual studies, followed by an overview of the data integration phase of the study. Results are presented in Chapters 4, 5, 6, and 7, respectively.

3.5.1. Theoretical Literature Review

As noted above, in the fourth phase of the theoretical literature review, a thematic analysis was conducted to identify patterns and key ideas from the articles identified representing each of the primary theories. The doctoral researcher derived themes from each of the five identified key theories, as well as directly from the concept of aesthetic experience, to represent the theories and concept within the data integration phase of the overarching grounded theory study (see themes in Chapter 4, section 4.3.2.2.4). These themes also informed the development of the survey instrument, and in turn influenced the focus group discussion guide. See Chapter 4 for details.

3.5.2. Survey

The survey study produced both quantitative and qualitative data, and quantitative methods were used to analyse both kinds of data. A conventional content analysis of the single open-ended question, as well as narrative data provided in comment fields within six questions, was conducted to develop categories and sub-categories from the narrative responses. The content analysis approach was chosen to allow for the development of categories that could be analysed alongside themes derived from the other studies and to allow for codes to be quantified. Given the large amount of data that a survey can garner, this type of code quantification can be useful in identifying patterns and in confirming common understandings or experiences in the data (Hsieh, 2005).
Open line-by-line coding was undertaken by the doctoral researcher, as well as by a team of research assistants. The research assistants’ codes were used by the investigator for triangulation and to reduce bias in the findings. Categories and subcategories were then developed by the investigator, and the codes were also quantified to highlights patterns or trends and to support the development of the primary categories. These categories were used as quantitative constructs in the data integration phase of the overarching study. See chapter 5 for details. The UF Qualtrics system was used for the quantitative analysis of closed-ended questions. Basic descriptive statistics were generated using Qualtrics. Cross tabulation was used to create tables for cross-comparisons across the arts professionals and public health professionals-groups.

3.5.3. Focus Groups

Two separate analyses of the focus group data were undertaken. First, the transcribed focus group data were analysed through thematic analysis. A grounded theory coding approach was used to code the data. This approach was selected to allow the coding process to identify and preserve the actions and feelings conveyed by participants as opposed to identifying topics. Given that aesthetic experience is a complex phenomenon, this approach was useful in capturing lived experiences with more meaning, and in identifying patterns in the data.

This work was undertaken by the doctoral researcher and, as with the survey analysis, a team of research assistants also coded the data to provide triangulation and reduce investigator bias. Cross comparisons of themes and sub-themes were conducted across the three population groups – public health professionals, arts professionals and program participants. These cross-comparisons were undertaken to create a deeper understanding of the unique perspectives of each group and to explain the findings from the quantitative survey data.
In addition to the grounded theory coding and thematic analysis, a context-mechanism-outcomes (CMO) analysis was employed to identify connections between the context, mechanisms and outcomes of the arts-based health communication programs that were discussed in the focus groups. CMO analysis is designed to help enhance understanding of how a program can activate specific mechanisms in obtaining desired outcomes (Jackson & Kolla, 2012; Pawson & Tilley, 1997). This approach was chosen as a means for deepening the exploration of patterns and relationships between constructs in the data, and to help identify specific mechanisms of the arts that people perceived to be at play in the relationships between the arts and aesthetic experience and between aesthetic experience and readiness for behaviour change and/or behaviour change. The CMO analysis also provided an opportunity for comparisons to be made across art forms as well as populations.

In this analysis, the data were coded with five different CMO codes, which represented different ways in which participants linked the context of arts-based health communication programs, with the mechanism of aesthetic experience, the five different outcomes – self-efficacy; intent for behaviour change; behaviour change; self-efficacy and intent for behaviour change; and self-efficacy and behaviour change. Codebooks were developed for each analysis.

Final themes were produced from the thematic analysis, while quantitative constructs (number of CMO instances) were derived from the CMO analysis. Data validation included member checking, peer debriefing, and thick description (Hadi & Closs, 2016; Creswell, 2018).

3.5.4. Data Integration

The data integration phase of the study encompassed the final and overarching mixed methods grounded theory analysis. As noted previously, an interactive data analysis approach was used throughout the study to provide a means for the data to inform and guide the iterative
process (Fetters, 2020). This approach allowed back-and-forth exchanges between the data sets and findings throughout the study to distil primary themes and constructs. In the data integration phase, the data were merged to explain, corroborate and enhance the findings (citations). Chapter 7 will elaborate on these concepts.

A spiraling comparison approach was used to allow for a cyclical consideration of the quantitative and qualitative findings from each study. This process, along with the back-and-forth exchanges, allowed common constructs and themes to emerge and for them to be compared across the data sets. In the back-and-forth process, the doctoral researcher iteratively considered the quantitative data, constructs and statistics and qualitative themes to compare, identify linkages and to allow the qualitative data to explain the quantitative data.

Figure 3.5

*Data Integration Model, Spiraling*
The data integration process also utilized diffraction, which provided an important step of allowing for and identifying differences in findings across the data sets. The diffraction method acknowledges that contradictory information cannot be neatly integrated, but must be allowed to stand out as a conflict or difference (Uprichard & Dawney, 2019). This approach is particularly important in studies of social phenomena and complex interventions, such as the arts (Fancourt & Finn, 2019).

Joint displays were used as an analytic tool to link, corroborate and explain themes and concepts, and to organize and summarize the findings. In mixed methods research, joint displays are developed and used iteratively to organize data and to yield new ways of thinking about, interpreting, and presenting the data (Guetterman et al., 2015; Fetters, 2020). And, more specifically, use of a joint display, as a linking activity, facilitates the discovery of commonalities, associations and connections across the qualitative and quantitative data sets and leads to the development of constructs or theories that represent the linkages (Fetters, 2020).

The joint displays used in the analysis allowed for linkages between the study’s three context areas – arts-based health communication, aesthetic experience and health behaviour change – to emerge, and for corroboration, or confirmation, across the quantitative and qualitative methods. They also allowed the qualitative data to explain the quantitate data.

The final integrated results and meta-inferences were presented in the form of a conceptual model that illustrates the relationships, including facilitators and barriers, between aesthetic experience and behaviour change in arts-based health communication programs as perceived by the arts and public health professionals who design and facilitate such programs and people who participate in them (see Chapter 7, Section 7.3.6).

3.6. Ethical Considerations
As previously noted, the survey and focus group studies were reviewed and approved by the University of Florida Institutional Review Board (IRB) and the Ulster University Faculty of Arts Research Ethics Filter Committee. Respect for the dignity and comfort of participants was considered at every step in the overarching study, and informed consent was garnered for the survey and focus group studies.

In the survey study, participants were provided with information about what they were being asked to do, how their information would be used, how to contact the Principal Investigator and the University of Florida Institutional Review Board (IRB) and the Ulster University Faculty of Arts Research Ethics Filter Committee, and that they could discontinue their participation at any time. None of the questions in the survey posed a significant risk to the participants, and given that they could choose where and when to complete the survey, there was minimal risk to their comfort.

Informed consent was also garnered for the focus group study. Participants were provided with the informed consent form either via e-mail before their participation or when they arrived for the group. Ample time, as well as the opportunity to ask questions, was provided. Participants were provided with comfortable seating, drinks and snacks, and were also reminded that they could discontinue their participation in the study at any time. The conversations were audio recorded, and those recordings were deleted after transcriptions were completed and validated. Focus group participants were provided with a $20 Amazon gift card to offset costs they may have incurred to participate, such as for transportation, lost wages, parking or childcare.

Member checking was conducted to ensure that all participants had the opportunity to review the analysis of their focus group conversation, and to express any concerns regarding the representations of their contributions, the analysis or the communication of findings (see Chapter
6, section 6.3.5.2). One participant offered clarification of one point, and a change to the analysis was made accordingly by the doctoral researcher. Other than that, all participants felt that the analyses accurately represented the conversation they participated in and their views.

All identifying information for both studies was kept in encrypted and password protected University of Florida Qualtrics and Dropbox systems.

3.7 Conclusion

As described above, the explanatory sequential mixed methods grounded theory design included a theoretical literature review, survey, and seven focus groups, undertaken in iterative stages. Individual analyses of each data set were followed by data integration and interpretation, which led to meta-inferences that formed the grounded theory and the conceptual model. Chapters 4, 5, and 6 will present the details of each of the individual studies, respectively, and Chapter 7 will present the data integration and interpretation, including the resulting conceptual model that represents the grounded theory.
Chapter Four: Study One: Review of the Theoretical Literature

4.1 Introduction

This review was conducted as the initial data collection method in the explanatory sequential mixed methods grounded theory study. The goal of this theoretical literature review was to identify key theories related to each of the context areas of the study that could contribute as a data set to the overarching mixed methods grounded theory study, and contribute to the development of the conceptual model (the study’s second objective). These context areas were: arts-based health communication, aesthetic experience, and health behaviour change. Given the lack of literature explicitly linking aesthetic experience to behaviour change in art-based health communication programs – and, in the construction of the grounded theory - the existing theory was a critical data set. It served to: 1) identify existing philosophical assumptions; 2) identify links, if any, previously made between concepts; and 3) develop a set of themes to represent these philosophical assumptions within the data integration phase of the study.

The focus on the arts and aesthetic experience within the study necessitated some framing of the concept of art. There is no single sanctioned definition of art to call upon, and this review did not attempt to present one. Attempts to define art remain highly flawed and contested (Morokawa, 2018; Adajian, 2018; Monseré, 2016). However, the terms “art” and “the arts” were used to refer - very broadly and inclusively - to variations of music, the visual arts, dance, drama, literary arts, digital arts, interdisciplinary arts, and other forms of expression that are referred to as forms of art across cultures. This inclusive approach was guided by the classification of art forms developed by Davies and colleagues (2012) specifically for population-based health research. This classification includes five categories of arts: 1) performing arts; 2) visual arts,
design and crafts; 3) literary arts; 4) community and cultural festivals, fairs and events; and 5) online, digital and electronic arts, and acknowledges a range in how people engage with the arts (e.g. more passively or more actively). In the review, as in the overarching study, art was referred to as both objects and experiential engagement, including making, viewing, and other participation and expression. Both the overarching study and this review also acknowledged a range of art forms and practices, from more formally and historically sanctioned art forms (e.g. poetry, theatre and ballet) to forms that extend those boundaries, such as hip hop, street art, and quilting.

The review embraced and, in relation to the difficulty of defining art, prioritised the notion of art as human behaviour, both within daily life and within more formalized or ritualized activities (Davies, 2012; Dissanayake, 1980; Dissanayake, 2015). This view assigns function to art, both in its recognition that the experience of art has intrinsic value and rewards, and in its practical functionalities, including its use as a means to stimulate aesthetic responses, communicate, attract interest, and shape emotion.

While art and aesthetics are often presented as overlapping concepts, this review recognized they are not the same and, indeed, can exist separately from one another. Art is not always aesthetic, and aesthetic experience is not only derived from art. Like art, the term “aesthetic experience” eludes a single definition but is foundational to this study (see section 4.3.2 below). As a basis for its exploration of aesthetic experience, this review explored varied perspectives, such as the notion of everyday aesthetics (Mandoki, 2016; Nanay, 2016; Leddy, 2012; Melchionne, 2013). This idea distinguishes aesthetic experience as those that are different from other moments and tend to linger in one’s memory and senses (Dewey, 2005; Dowling, 2010). The recognition of the lingering effects of aesthetic experience exemplifies the kind of
themes that this review sought to identify as a basis for exploring the relationships between aesthetic experience, self-efficacy and behaviour change in arts-based health communication programs.

The sections below will detail: 1) the methods undertaken across four phases within the theoretical literature review; 2) the results of the review in the form of written summaries of the key theories reviewed and the themes derived from those reviews; and 3) conclusions in the form of the key themes that were used in the data integration phase of the overarching mixed methods grounded theory study.

4.2 Methods

The theoretical literature review was conducted across the three primary domains of the study:

1. the context domain: *arts-based health communication*;
2. the mechanism domain: *aesthetic experience*; and
3. the outcome domain: *health behaviour change*.

The review was undertaken in four phases (see Figure 4.1). Phase one of the review included three initial literature searches, which were conducted through a snowballing approach, wherein seminal or key theoretical articles for each concept were identified and used as the starting set (Danglot et al., 2019; Jalali & Wohlin, 2012; Badampudi et al., 2015). These articles were identified as those that: 1) have been most consistently cited over time; 2) present a theory, frame, or definition that is widely accepted and cited; and/or 3) have been highly influential in establishing the theory.

**Figure 4.1**

*Phases of the Theoretical Literature Review*
4.2.1 Phase One

Backward snowballing was undertaken through a review of each article’s reference list, and forward snowballing was undertaken using the Google Scholar search engine’s “cited by” filter. This method was used to identify the most commonly cited, relevant, and recent publications on each topic. These steps were undertaken iteratively, after full review of each included article, until no new articles were found. This snowballing approach has been found to be highly precise and effective in comparison to traditional database searches (Badampudi et al., 2015).

4.2.2 Phase Two

In the second phase, a review of the articles obtained from the initial search led to the identification of a range of theories or frameworks that underpin each general concept and have the potential to establish links between them. The following inclusion and exclusion criteria were used:

Inclusion criteria:
• Established theories, conceptual models, theoretical or practical frameworks, methods, or strategies related to arts-based health communication, aesthetic experience and behaviour change

• Theories, conceptual models, theoretical or practical frameworks, methods, or strategies that suggest or include conceptual linkages between two or more of the study’s context areas

Exclusion criteria:

• Theories, conceptual models, theoretical or practical frameworks, methods, or strategies related to the study areas that do not suggest or include conceptual linkages between two or more of the study’s context areas

Although the search was designed to identify key relevant theories, the frames, methods, and strategies were kept in this stage of the search to provide the opportunity for underlying theory to be identified. The literature related to each of these theories and frameworks was examined to identify relevance to, or specific linkages between, arts-based health communication, aesthetic experience and health behaviour change.

4.2.3 Phase Three

In the third phase, search strategies were developed for each of the 12 theories or frameworks, and each of the searches was carried out systematically, using PubMed, Web of Science, and CINAHL (see search strategies in Table 4.1 below). PubMed was chosen due to its focus on life sciences literature; while Web of Science was chosen for its broad coverage of all of the sciences, including the social sciences, arts and humanities. CINAHL is a nursing database and was chosen as a particularly good source of primary studies for qualitative evidence syntheses (Wright et al., 2015). Each strategy was tested and refined prior to the final search.
Additional hand searching was conducted using a backward snowballing approach (reference list review). The following criteria were used:

**Inclusion criteria:**

- Established theory
- Theories that suggest or include conceptual linkages across two or more of the study’s context areas

**Exclusion criteria:**

- Conceptual or practical frameworks, methods, strategies, or other non-theories
- Theories that do not suggest or include conceptual linkages across two or more of the study’s context areas

In this final stage of the review, a set of key theories that represented the study’s context areas and provided conceptual linkages between arts-based health communication, aesthetic experience and health-related behaviour change was identified. Key or seminal articles representing each of these theories were identified and used in phase four of the review.

### 4.2.4 Phase Four

In the fourth and final phase of the review, thematic analyses of each of the key or seminal articles identified in the searches were conducted. Themes were drawn from the articles representing each of the theories for use in the data integration phase of the study.

### 4.3 Results

The review resulted in one broader set of *relevant* theories and conceptual frameworks and one set of *key* theories related to arts-based health communication, aesthetic experience and health behaviour change. Search strategies and results for the broader set of theories and
conceptual frameworks are presented in Table 4.1 below. Figure 2 below identifies those theories and conceptual frames and denotes those that are considered theories\textsuperscript{1}. 

**Figure 4.2**

*Relevant Theories and Conceptual Frameworks Reviewed in Phase Two*

<table>
<thead>
<tr>
<th>Context</th>
<th>Mechanism</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts-based Health Communication</td>
<td>Aesthetic Experience</td>
<td>Health Behaviour Change</td>
</tr>
<tr>
<td>Entertainment Education</td>
<td>Everyday Aesthetics</td>
<td>*Self-efficacy</td>
</tr>
<tr>
<td></td>
<td>Neuroaesthetics</td>
<td>*Social Cognitive Theory</td>
</tr>
<tr>
<td></td>
<td>*Resonance</td>
<td>Transtheoretical Model</td>
</tr>
<tr>
<td></td>
<td>*Identification</td>
<td>*Socioecological Model</td>
</tr>
<tr>
<td></td>
<td>*Embodiment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>*Transportation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>*Self-transcendence</td>
<td></td>
</tr>
</tbody>
</table>

As the literature on arts-based health communication is nascent, within this context domain, Entertainment Education (EE) was the only consistent framework to emerge. EE, however, is not a theory, but rather a strategy, and is therefore given consideration in this review and the overarching study, but not included as a theory in this data set.

Within the mechanism domain of aesthetic experience, three theories emerged as central: embodiment, resonance (including cultural resonance and emotional resonance) and self-
transcendence. Others were useful to the doctoral researcher’s general understanding and framing of the study but did not either stand up as an established theory (everyday aesthetics, neuroaesthetics), or did not provide clear links across the study’s three domains (identification and transportation).

While there are many health behaviour change theories, self-efficacy and social cognitive theory emerged as the most central and relevant health behaviour change theories to the study. The emphasis in social cognitive theory on self-efficacy, mastery experiences, social modelling (or vicarious experiences), social persuasion, and physical and emotional states aligns significantly with constructs involved in the arts, particularly the narrative arts. Self-efficacy, while a significant component of social cognitive theory, was included as a separate theory because of its close links to arts engagement and aesthetic experience. The Transtheoretical Model was excluded because it is a theory of change, as noted above. The Socioecological Model was excluded because its themes are embedded in Social Cognitive Theory.

As a result of the searches and reviews described above, five key theories, shown in Figure 4.3 below, were included in the final phase of the study.

Figure 4.3

*Phase Three Results: Key Theories Included in the Data Set*
Table 4.1 below shows the search returns for each of these identified theories, along with the two to three key or seminal articles that were identified to represent these theories in the thematic analyses in phase four of the review.

**Table 4.1**

*Search Returns and Seminal/Key Articles Identified*
<table>
<thead>
<tr>
<th>Search Topic</th>
<th>Search Strategy</th>
<th>PubMed</th>
<th>Web of Science</th>
<th>CINAHL</th>
<th>Snowballing</th>
<th>Seminal/Key Articles</th>
</tr>
</thead>
</table>
The sections below will present the results of the reviews of these key or seminal articles, starting with background information on each of the context areas that was derived from the initial phases of the review. To provide a comprehensive background on each theory, the reviews presented below draw on information from the identified key or seminal articles as well as other articles identified in the reviews, particularly those that make linkages across this study’s context areas. The themes derived from the thematic analyses of the key or seminal articles are presented at the end of each section.

4.3.1 Arts-based Health Communication Context Area

Health communication refers to the use of evidence-based communication strategies to inform and influence individual and community decisions to enhance health and is a core competency in public health (Bernhardt, 2004; Freimuth & Quinn, 2004). The central goals of health communication include engaging target populations in two-way dialogues and influencing positive changes in attitudes and behaviours relevant to health issues (Shen et al., 2014). In the United States, health communication was added to the list of Healthy People objectives in 2020 (Healthy People 2020, 2020), where it remains an important focus.

Despite the recognition of their importance, health communication interventions are recognized to fall short of meeting their goals, and there is growing evidence to suggest that approaches that are more participant-oriented, community involved, and grounded in local cultural norms are needed (Green & Witte, 2006; Neuhauser et al, 2013, Logan, 2014). Since the 1960s, health communication professionals and theorists have looked to the fields of communication, marketing, and entertainment for knowledge and theory that can enhance the efficacy of health communication programs. These efforts have leaned heavily on the art of persuasion, working to make ideal health behaviours desirable, and have led to investment in
creative mass media communications and entertainment education programs that utilized music, drama, narratives, and design to engage audiences with health information (Shen et al., 2015; Hinyard & Kreuter, 2007; Singhal & Brown, 2018; Kreuter et al., 2007). More recently, there has been an increase in awareness of the importance of culture in health communication. The arts, specifically, have proven particularly useful as a means for facilitating health communication, knowledge transfer, and behaviour change (Williams, 2011; Archibald et al., 2014; Clift, 2012).

Within the field of health communication programs, the arts are often used in programs that engage Entertainment Education (EE) strategies. EE is “a process of purposely designing and implementing a media message to both entertain and educate” (Singhal & Rogers, 2012). EE strategies took shape in developing countries in the 1950s, where mass media radio and television programs were created to address health issues (Singhal & Rogers, 2012; Sonke et al., 2018).

In the 1970s, Miguel Sebido, a young Mexican writer who developed an interest in telenovelas, developed a theoretical approach to EE, known as the Sabido Method. The approach uses Bandura’s Social Cognitive Theory as its basis, and is built upon two primary premises - that “telenovelas can reinforce a value in the audience” and that they can also “provoke a specific social behavior” (Sabido, 2011). Research has demonstrated its effectiveness in relation to health issues such as HIV, and subsequently, the Sabido Method has guided the development of many EE programs in the health communication realm around the world (Sabido, 2011; Refera, 2004; Panford et al., 2001). Social Cognitive Theory has, ever since, been the primary theoretical basis for the EE strategy. Dramatic and narrative theories, along with other theories such as Habermas’
theory of communicative action and the elaboration likelihood model have also contributed to the understanding of EE strategies.

EE programs include mass-media-based narrative programs, as well as a tremendous variety of live interactive approaches such as applied and forum theatre and visual arts programs, such as murals. Mass-media-based EE programs have become increasingly utilized throughout the world, building on the ubiquity and importance of entertainment and mass media (Singhal & Rogers, 2012). While the arts are commonly utilized within EE-based health communication programs, there is no consideration in the EE literature of the roles of art, artistry, and aesthetic experience in relation to the design and effectiveness of the programs.

Additionally, Augusto Boal’s Theatre of the Oppressed and the pedagogy of Paolo Friere are sometimes used in health communication programs (Sajnani, 2009; Goulet et al., 2011; Obregon & Mosquera, 2005; Gadotti & Torres, 2009). These approaches were designed to empower social change and development, and often address issues considered social determinants or upstream drivers of health and health disparities. However, they were not designed specifically for health communication, and therefore were not included as theory in the arts-based health communication program domain.

As noted above, no theories were identified in the context area of arts-based health communication programs. The following sections will identify theories related to aesthetic experience and health behaviour change.

4.3.2 Aesthetic Experience Context Area

The philosophical concept of aesthetic experience took form between the late 17th and early 20th centuries. During the 18th century and largely through the twentieth, the term “art”, along with the term “fine art”, was used to refer to a realm of prestigious and revelatory works
and was concerned primarily with the technical precepts of the works (Kristeller, 1951; Brown & Dissanayake, 2009). Alongside this concept, the term “aesthetics” took on an elitist connotation and was often used to refer to a more reverential mode of attention toward works of high art (Shiner, 2001; Davies, 2006; Brown & Dissanayake, 2009). In contrast, the concept of aesthetic experience began to serve as an umbrella concept for a more experiential concept, distinct from a judgement of the quality or value of a work of art (Shusterman, 2010). The concept came into focus in the early twentieth century in alignment with the general attention to the concept of experience that was elaborated by the influential lebenphilosophy school of thought. Articulated by the German philosophers, Friedrich Nietzsche, Arthur Schopenhauer, and Søren Kierkegaard, lebenphilosophy focused on human experience, largely in contrast to the mechanism that was viewed by many as inherent in the rising industrial era (Shusterman, 2010).

While there is no single definition of aesthetic experience to call on, there is a common thread among the many definitions offered that aesthetic experiences are different from more mundane or “normal” everyday experiences and that they tend to linger in one’s memory and senses. In considering the range of definitions offered, Markovic (2012) defines aesthetic experience as “an exceptional state of mind which is qualitatively different from ‘normal’ everyday mental states” (p. 12). This definition considers aesthetic experience as a mental state that involves a fascination or absorption with a particular object of focus to the extent that one’s awareness of the surrounding environment and of self are reduced and the temporal experience (sense of time) is also distorted. Markovic recognizes also that this quality of experience has similarities to the concept of flow state defined by Csíkszentmihályi (1990) as well as to the concept of peak experience defined by Maslow (1968).
Dowling (2010) follows on from the notion of fascination or absorption described by Markovic by distinguishing aesthetic experience from moments in everyday life that are simply pleasurable, suggesting that aesthetic experiences engage “critical attention and interest”, beyond pleasure alone (p. 229). This view aligns with the thinking of earlier theorists, such as Dewey (2005), who suggested a distinction between “mere” experiences and “an experience”. This idea emphasizes the specialness of aesthetic experiences against the backdrop of other highly varied experiences, suggesting a particular poignance of aesthetic experiences and their ability to have lingering, meaningful effects.

Markovic’s view encompasses and builds upon this idea, as it suggests that fascination or absorption with a particular object of attention creates a state of amplified arousal, which in turn creates a strong emotional response, which is typically a feeling of exceptional relationship or unity with the object of attention. In this view, cognition, attention, and emotion are interrelated in creating the aesthetic experience (Markovic, 2012). This view also aligns with the way the field of neuroaesthetics defines aesthetic experiences as states that arise from distinct interactions between the sensory, emotional, and cognitive neural systems (Chaterjee & Vartanian, 2014).

Many theorists have dissected the concept of aesthetic experience at length, proposing numerous constructs to define, explain and position it in a useful manner (Carroll, 2002; Townsend, 1987; Dufrenne, 1973). A helpful overview of the various views of aesthetic experience is offered by Carroll (2002), who defines three categories into which all of the traditional views on the topic of aesthetic experience may fit: the affect-oriented approach, the content-oriented approach, and the axiologically-oriented approach.

The affect-oriented approach emphasizes the experiential qualities of aesthetic experience, describing aesthetic experience in relation to its ability to remove or elevate one
from the mundane flow of life, creating experiences that are differentiated, memorable and
transformative. Quite distinctly, content-oriented views stress the properties of the objects that
are the focus of the experience and suggest different properties (such as appearance) that may be
the focus of, or produce, aesthetic experiences. In this view, the concepts of beauty and taste, or
the judgement of taste, are a common thread (Kant, 1987).

The third category defined by Carroll, the axiologically-oriented approach, orients
aesthetic experience to the value that it might produce. In most instances, this value is intrinsic.
While it does not identify with any specific or distinct experiential qualities, it does recognize
that qualities such as pleasure or emotional uplift can be valued for their own sake, as distinct
from what they may lead to (Caroll, 2002). This category overlaps with another view of aesthetic
experience worth noting, that of pragmatist aesthetics. This concept ascribes to the notions that
aesthetic experience can have a pragmatic use beyond its intrinsic value, that it cannot be
understood without a socio-cultural context, and that the form of the modality cannot be
separated from the experience (Shusterman, 2000; Ross & Wensveen, 2010).

The concept of everyday aesthetics offered by contemporary theorists reflects this
recognition of both the intrinsic and extrinsic value of aesthetic experience, and hearkens to the
original orientation of the concept as a sensory experience that is distinct from others, is
significant, and that also can have lingering effects (Mandoki, 2016; Nanay, 2016; Leddy, 2012;
Melchionne, 2013). The lingering effect of aesthetic experiences highlights their specialness and
may carry with it specific dimensions, such as a sense of beauty, emotion, empathy, or
inspiration. And, even years later, one can summon those sensory dimensions just by
remembering the experience, and as a result, may see the world around them differently, noticing
form, colour, beauty, light, and even meaning where they might not normally see it.
Although aesthetic experience is positioned as a context area in the study, and not a theory, the inclusion of themes representing aesthetic experience were critical to the emerging theory in order to adequately round it in that domain area. Three themes representing aesthetic experience are included:

1. Aesthetic experiences are different than other experiences
2. Aesthetic experiences engage critical attention and interest
3. Aesthetic experiences are memorable and have lingering effects

In aesthetic experience domain, three key theories – embodiment, resonance, and self-transcendence - were included in the data set. An overview of each of these theories, along with the themes derived from the literature and included in the data integration phase of the study, are presented below.

**4.3.2.1. Embodiment**

Much recent writing on aesthetic experience emphasizes the role of the body (Anderson, 2003; Brinck, 2018; Niedenthal et al., 2005; Kirsch et al., 2016; Ticini et al., 2015). Over the past decade, some scholars have referred to a social turn in which increased emphasis on embodied knowledge and embodiment is evident (Reynolds & Reason, 2012). Brinck (2018) argues that aesthetic experience emerges from bodily and emotional engagement with works of art, emphasizing the embodied visual exploration of an artwork in a physical space. Brinck (2018) also suggests that body movements made in response to artwork provide perceptual feedback and cue emotion. “The two processes cause the viewer to bodily and emotionally move with and be moved by individual works of art, and consequently to recognize another psychological orientation than her own, which explains how art can cause feelings of insight or awe and disclose aspects of life that are unfamiliar or novel to the viewer” (p. 1).
Like aesthetic experience, there is no single theory of embodiment that explains the phenomena referenced above. Rather, numerous theories frame the relationship of the body to cognition, knowledge and knowledge acquisition, communication, emotion and socialization in nuanced ways. While these theories are based on ample empirical research that suggests either correlation or causality between the constructs involved, no one theory underpins or explains the results of these studies (Niedenthal et al., 2005).

In general, embodiment theories position cognition in the context of a system, inclusive of the individual and the environment (Marshall, 2014; Edelman, 1992; Anderson, 2003; Stewart et al., 2010). The theories suggest that cognition does not represent the functioning of an isolated computational mind, but rather encompasses the brain, the body, the environment, and culture together. Marshall (2014) suggests that embodiment “places the organism as an active agent that is tightly interconnected with its environment, with the actions of the individual constantly modifying these interconnections, a process that in turn influences subsequent actions” (p. 2). In this view, the individual and their environment cannot be separated, or their boundaries delineated, but the body and its place in the environment are central to cognition.

Embodiment has long been understood as integral to thoughts, feelings and behaviours (Barsalou, 2008). Within the field of public health, this knowledge is widely applied in social marketing and health communication campaigns as well as in participatory programming. Application of embodiment theories in these contexts recognizes that the body, physical environment and social context all affect cognition, learning and behaviour and help explain how people use physical sensations to make sense of abstract concepts (Parzuchowski et al., 2014; Barsalou, 2008; Landau et al., 2010).

Thematic analyses of three key articles on embodiment resulted in three themes:
1. Embodiment encompasses brain, body, environment and culture
2. Embodiment influences thoughts, feeling and behaviours
3. The body, environment and social context affect cognition, learning and behaviour

4.3.2.2. **Resonance**

The term “resonance”, which is often used concerning aesthetic experience, is widely used as a metaphor in sociological studies of culture, media, and social movements (Snow et al., 1986; McDonnell et al., 2017). Typically, the term has been used to describe the level to which ideas, messages or cultural artifacts fit with the cultural worldviews of the people who encounter them. This fit may shape the cognitive processes that individuals use to interpret and respond to the world around them (Cerulo, 2010; McDonnell et al., 2017).

McDonnell and colleagues (2017) offer a view of resonance that emphasizes relationships between objects (such as cultural artifacts), people, and situations, and highlights novelty and the emergence of resonance as a result of the interactions between those relations. They suggest that resonance is not simply one’s alignment with a familiar or congruent idea or object, but rather “an experience emerging when affective and cognitive work provides actors with novel ways to puzzle out or ‘solve’ practical situations” (p. 3). This pragmatist view, harkening back to Dewey’s perspective, reinforces resonance as a process produced through interaction between an object and audience in a particular situation. It is a creative moment, during which an individual becomes activated in seeking a solution.

This view also recognizes cognitive distance and meaning-making as critical to the experience of resonance. In contrast to the idea that resonance comes from the congruence between an idea and object and a worldview, current thought suggests that it is established by a distance between those elements (McDonnell, et al., 2017). “Resonance is most likely and likely
strongest when the solution offered by the object is neither too familiar nor too resistant to interpretation or extension” (McDonnell et al., 2017, p. 6).

Additionally, emotion has been found to be a critical component of resonance (Ferree, 2003). McDonnell and colleagues (2017) contend that heightened emotion makes resonance more likely, noting that the experience of emotional arousal impacts the cognitive processes people use to both gain information and approach problem-solving. They also suggest that resonance produces heightened emotions as people come to novel solutions.

This review of the literature necessitated a search strategy that encompassed cultural resonance and emotional resonance as terms. Inclusion of the term “resonance” in the search was problematic, as it generated many returns related to kinetic theories. From the two identified key articles, three themes were garnered and included in the data set:

1. The alignment of an idea (of lack thereof) with one’s worldview shapes cognitive processes
2. Resonance can activate insight, problem solving and action
3. Emotional arousal heightens resonance

4.3.2.3. Self-transcendence

The term “self-transcendence” was made known through the writings of Viktor Frankl and Abraham Maslow in the 1960s. Both theorists linked self-transcendence to the pursuit of meaning beyond the self and expansion of conceptual boundaries of the self (Frankl, 1966; Maslow, 1968). Frankl considered self-transcendence “the essence of being human” (Frankl, 1966, p. 104), and one of the primary characteristics of human existence. Maslow placed self-transcendence at the top of his hierarchy of needs, above self-actualization, recognizing that
transcendent experiences lead a person to experience a sense of identity that transcends or extends beyond the personal self toward “the divine” (Venter, 2012, p. 70).

As a nursing theory, self-transcendence is framed in relation to life-span development. As such, the theory recognizes self-transcendence among other inherent change processes that occur throughout the lifespan (Reed, 2008). The theory provides a framework for research and practice concerned with well-being in the context of difficult life situations, such as serious illness. It builds from two primary assumptions. First, that human beings are capable of a type of awareness – very much akin to spiritual awareness - that extends beyond the basic physical and temporal dimensions of the everyday (Reed, 1997a). In this way, self-transcendence describes experiences that connect people deeply and transformatively to themselves, others, the world around them, and their sense of “god” or source of creation.

Secondly, the theory assumes that self-transcendence is a developmental imperative, or a human capability that needs or demands expression (Reed, 2008). As a natural part of human development, self-transcendence contributes to well-being, wholeness and self-realization. Self-transcendence refers to the capacity that human beings have for expanding their conceptual boundaries or their current-state perceptions of themselves or the world around them. Self-transcendence occurs across three primary realms – intrapersonally, when one expands self-boundaries around values, beliefs, dreams, etc.; interpersonally, when one expands perceptions of others or the environment around them; or transpersonally when one expands their notions of or connects with dimensions beyond the physical world (such as notions of God or heaven). Additionally, self-transcendence can occur in a temporal sense when past and future are integrated in ways that have implications or meaning for the present, as in the experience of
insight. Self-transcendent moments are often described in relation to major insight or epiphany, or as “aha” moments, when perceptions or conceptual boundaries shift.

Nursing researcher/theorists Pamela Reed and Noel Coward, among others, have shown associations between self-transcendence and well-being. Their studies have shown that when people self-transcend, or expand their conceptual boundaries, they feel a greater sense of well-being or wholeness (Reed, 2008). They have also found that people are particularly susceptible to self-transcendence when they are vulnerable, and in particular, when they are dealing with illness or loss.

Two themes related to self-transcendence were derived from the seminal studies and included in the data set:

1. Self-transcendence expands conceptual boundaries
2. Self-transcendence contributes to wellbeing and self-realization

4.3.3. Health Behaviour Change Context Area

Health behaviour refers to the countless things individuals and groups do that influence physical, mental, emotional, social, and spiritual health and wellbeing (Hayden, 2019). These behaviours range on a scale from positive to negative regarding their influences on health and health outcomes. Health behaviour change theory contributes to the understanding of how individual and collective health behaviours contribute to health and health outcomes (Michie et al., 2018). It also contributes to the understanding of health behaviours, the development of health interventions and to research on health behaviours.

Many factors – personal, environmental, and sociocultural – influence health behaviours. Such factors include people’s beliefs, values, gender, socioeconomic status, attitudes, skills and culture. Many of these factors form the basis for a range of health behaviour theories that have
been developed, particularly over the past half-century. Development of these theories has coincided with increased emphasis on health behaviours concerning health, morbidity and mortality (Yoon et al., 2014; Sheeran et al., 2017).

4.3.3.1. Social Cognitive Theory

As discussed in Chapter 1 (see section 1.1), social cognitive theory is a primary theory of behaviour change. Albert Bandura’s (1999) Social Cognitive Theory (originally, and still sometimes referred to as Social Learning Theory) offers a model of “triadic reciprocal causation” (p. 23) between: 1) cognitive, affective, and biological events; 2) behavioural patterns; and 3) environmental events (Bandura, 1989; Bandura, 1999). The theory contends that people are “self-organizing, proactive, self-reflecting, and self-regulating, not just reactive organisms shaped and shepherded by environmental events or inner forces” (Bandura, 2001, p. 266).

This concept of reciprocal determinism defines a dynamic interplay between personal factors, a person’s environment, and their behaviours in which a person’s interpretation of their personal factors and their environment affects their behaviours, and vice versa (Hayden, 2019; Parjares, 2004). Personal factors may include knowledge, cognitive or practical skills, and self-confidence.

The theory emphasizes self-generated influences, or agency, as contributing factors to behaviour (Bandura, 1989; Bandura, 2012). In this perspective of agency, people exert their influence through their efficacy beliefs (Bandura, 2012). Individual behaviours are influenced by personal efficacy beliefs concerning things that people can control directly and by themselves. In spheres over which individuals do not have direct or sole control but which affect their lives, people must influence or work together with others.
Within its emphasis on human cognition, the theory recognizes that humans possess a unique capacity for symbolization, which supports comprehension of and responses to external influences and events (Bandura, 2001). It also recognizes that these influences and events affect behaviour through cognitive processes and that the ability to symbolize allows people to process, apply meaning to, and transform experiences into “cognitive models that serve as guides for judgment and action” (Bandura, 2001, p. 267).

Bandura also applies the social cognitive theory specifically to health behaviours (Bandura, 1998). In this domain, the theory recognizes self-efficacy as a “major basis of action” (p. 3). The theory specifies core determinants of health behaviour change, including knowledge (knowledge of health risks and benefits of different health behaviours and practices), perceived self-efficacy (the belief that one can control or change health habits), outcome expectations (i.e. benefits and costs of particular health behaviours), self-determined health goals and plans for achieving them, and the perceived facilitators and impediments to the changes sought (Bandura, 1998; Bandura, 2004). While knowledge of health risks and benefits is a precondition for health behaviour change, self-efficacy is required to overcome the challenges of making behavioural changes. Belief in one’s ability to succeed is an essential incentive to the effort required for changes to be made and sustained. Therefore, self-efficacy is the focal determinant. It not only determines motivation for behaviour change but influences other determinants, including goals and aspirations and perseverance in overcoming obstacles.

Bandura asserts that self-efficacy is not, as it may seem, just an individual construct (Bandura, 1998). Rather, self-efficacy can contribute as significantly to collective behaviour change (people working together to make change) as individual behaviour change, and is essential to the collective change that is needed to influence public health outcomes.
From the seminal articles on social cognitive theory reviewed, two primary themes were derived:

1. Learning occurs in a social context with a dynamic and reciprocal interaction of person, environment, and behaviour
2. Self-efficacy is the primary determinant for behaviour change

### 4.3.3.2. Self-efficacy Theory

In his seminal 1977 publication, *Self-efficacy: Toward a Unifying Theory of Behavioral Change*, Albert Bandura defined self-efficacy in terms of expectations of personal efficacy. More specifically, self-efficacy refers to “beliefs in one's capabilities to organize and execute the courses of action required to produce given levels of attainments” (Bandura, 1998, p. 3). The theory was developed from the framework of Social Cognitive Theory (Bandura, 1989). It suggests that people will attempt things they believe they can accomplish, while they will avoid attempting behaviours they don’t believe they can succeed in, or if they believe they may fail. A strong sense of self-efficacy enables people to try new things and take on challenges, even difficult ones, rather than seeing challenges as threats to be avoided (Hayden, 2019).

Bandura (1977) originally defined four principal sources of information that may lead to expectations for personal efficacy: performance accomplishments, vicarious experience, verbal persuasion, and physiological states. He asserted that “cognitive processes mediate change but that cognitive events are induced and altered most readily by experience of mastery arising from effective performance” (Bandura, 1977, pp 191).

Bandura (1982) established a causal relationship between higher levels of self-efficacy and higher levels of performance accomplishments across numerous conditions. He also defined a spectrum of expectations that differentiate between outcomes expectations (the level of
expectation that a particular behaviour will lead to a particular outcome) and efficacy expectations (the belief that one can successfully execute the behaviour that will lead to the expected outcome). Bandura highlights the importance of efficacy expectations, noting that even when individuals believe that a particular behaviour will lead to a desired outcome, if they lack confidence that they can carry out that behaviour, even the understanding of the relationship between the behaviour and the outcome will not influence their behaviour. Over time, Bandura refined his theory to identify four sources of influence that can be leveraged to develop self-efficacy: mastery experiences, social modelling (or vicarious experiences), social persuasion, and physical and emotional states (Bandura, 2012). This framing expands his previous notions, described above, to focus on these four elements as influences rather than information, and to broaden them slightly.

Mastery experiences are considered to be the most effective means for building self-efficacy (Hayden, 2019). These experiences occur when a person attempts to carry out an activity and is successful. This may involve the development and practice of new skills or skills that are similar to those already mastered. However, the development of a strong sense of self-efficacy does not come from building new skills upon similar skills, but rather relies on the working through of challenges or obstacles to achieve success with new skills (Bandura, 1994).

Vicarious experience, or social modelling, is “the observation of the successes and failures of others (models) who are similar to one’s self” (Hayden, 2019, p. 14), and can also influence self-efficacy. The effects of vicarious experience on self-efficacy are strongly mediated or moderated by the extent to which the model is like the viewer (Bandura, 1994). As such, higher levels of personal and cultural relevance can lead to higher self-efficacy effects. Vicarious
experiences may be derived from viewing others undertake activities in real life or through media, such as television, books or live performance.

Social persuasion, while often taking verbal form, may include verbal and other forms of encouragement, such as attention, applause or even being joined in a behaviour by others. Direct verbal persuasion, encouragement and affirmation from others can be powerful means for enhancing self-efficacy while, conversely, discouragement and criticism hinder self-efficacy.

The physical and emotional states that are experienced when a person is contemplating or practising a new skill or behaviour also mediate or moderate the development of self-efficacy. If a person experiences high levels of anxiety or stress while considering or practising a new skill, self-efficacy can be negatively affected. Conversely, a positive physical and emotional response can enhance self-efficacy. If stress is reduced and positive emotional states are produced in an activity, self-efficacy is enhanced (Bandura & Adams, 1977).

Thematic analysis of the seminal literature on self-efficacy produced a set of five themes that represent the theory in the data set:

1. People will attempt things they believe they can accomplish
2. Mastery experiences build self-efficacy
3. Vicarious experiences build self-efficacy
4. Social persuasion builds self-efficacy
5. Positive somatic and emotional states enhance self-efficacy

4.3.3.3. Themes

As noted above, two to five themes were derived from each of the five theories (plus aesthetic experience) included in the data set, creating a set of 18 themes. Those themes are presented in Figure 4 below.
As noted in the methods section, these themes were included in the overarching study’s data integration phase to contribute to the overall findings and the conceptual model (see Chapter Seven).

The literature review identified both explicit and implicit links between the five key theories. The direct link between self-efficacy and social cognitive theory has always been explicit, with self-efficacy centered as a primary determinant of behaviour change. Social Cognitive Theory is also implicitly linked to embodiment, as the “reciprocal interaction of person, environment, and behavior” theme derived from Social Cognitive Theory reflects the embodiment theme, “embodiment encompasses brain, body, environment & culture”. Similarly,
the theme that resonance can “activate insight” links to the way that self-transcendence “expands conceptual boundaries”. These explicit and implicit links are represented in Figure 5 below.

**Figure 4.5**

*Links Between Theories*

4.4 Conclusion

Using the lens of the overarching research question, five key theories were identified from a review of the literature related to arts-based health communication, aesthetic experience, and health-related behaviour change. These theories are: embodiment, resonance, self-transcendence, social cognitive theory, and self-efficacy. No key theories emerged in relation to arts-based health communication. Embodiment, resonance, and self-transcendence were identified as key theories related to aesthetic experience. Self-efficacy and social cognitive theory were identified as key theories in relation to health behaviour change. The eighteen themes derived from these five theories, as well as three derived from aesthetic experience,
represent these theories within the overarching mixed methods grounded theory study. These themes are:

- Embodiment encompasses brain, body, environment & culture
- Embodiment influences thoughts, feeling and behaviours
- The body, environment and social context affect cognition, learning and behaviour
- The alignment of an idea (or lack thereof) with one’s worldview shapes cognitive processes
- Resonance can activate insight, problem solving and action
- Emotional arousal heightens resonance
- Self-transcendence expands conceptual boundaries
- Self-transcendence contributes to wellbeing and self-realization
- Aesthetic experiences are different than other experiences
- Aesthetic experiences engage critical attention and interest
- Aesthetic experiences are memorable and have lingering effects
- Learning occurs in a social context with a dynamic and reciprocal interaction of person, environment, and behavior
- Self-efficacy is the primary determinant for behaviour change
- People will attempt things they believe they can accomplish
- Mastery experiences build self-efficacy
- Vicarious experiences build self-efficacy
- Social persuasion builds self-efficacy
- Positive somatic and emotional states enhance self-efficacy
These themes helped to ground the exploration of linkages between arts-based health communication, aesthetic experience, and health-related behaviour change in existing philosophical assumptions and links made previously between these three concepts. These themes also contributed to the development of the survey instrument and focus group discussion guide. Chapters 5 and 6 will present these next iterative steps in the overarching study.
Chapter Five; Study Two: Survey

5.1 Introduction

The next phase of the study was to use the key terms identified through the literature review to investigate and identify the values and beliefs of those involved in arts-based health communication programs regarding the relationships between arts engagement, aesthetic experience, self-efficacy, and health-related behaviour change in arts-based health communication programs. An online survey of public health and health communication professionals who use the arts in their programs and professional artists who work in public health and health communication programs was conducted. The survey questions were based on the literature review and findings of a previous study focused on the use of the arts in health communication programs in Uganda (Sonke et al., 2017). The following sections will overview the design of the survey and present the analysis of the data generated and the findings that resulted.

The survey method was selected to produce data and descriptive statistics about how the arts and aesthetic experience are used in health communication programs, and how professionals involved in those programs perceive relationships between the arts, aesthetic experience, and behaviour change. In a survey, the accuracy of the data depends primarily on how well the sample reflects the characteristics of the population overall and how well the answers to the survey’s questions measure what the investigator aims to describe (Fowler, 2013). Given that the population of interest was not previously defined, the study began with a systematic search and snowballing approach to identify and reach the population.
This study used a cross-sectional survey approach (Connelly, 2016). Given the complexity and importance of survey design in gathering reliable information, the doctoral researcher considered several survey quality frameworks as well as survey question design in developing the survey. The total survey error paradigm and the broader total survey quality framework, which apply the same general principles to provide models for identifying and addressing errors and weaknesses in survey design were both used to guide the design and testing of the survey (Biemer, 2010).

The total survey quality framework provided a checklist for assessing the quality of the survey across dimensions, including accuracy, credibility, comparability, usability and interpretability, relevance, accessibility, completeness, and coherence. Similarly, the total survey error (TSE) paradigm, helped to identify sampling and non-sampling errors that could compromise the survey’s reliability. Additionally, the issue of topic sensitivity and forced answering in survey design were given consideration (Roster et al., 2014; 2017). Response options such as “I don’t know” or “I’d rather not answer this question” were used to reduce the incidence of inaccurate responses.

Given that there was no previously identified population to access for garnering the specialized knowledge sought, the survey used a non-probability sampling approach (Ruel et al., 2015; Tyrer & Heyman, 2016). While this method does not provide a means for ensuring representation of the population, statistical significance, or determining sample error or bias, it provide a means for systematically obtaining a reasonable sample (Ruel et al., 2015; Griffith et al., 2016).

5.2 Methods
The following sections will present the study population, methods and results, including quantitative findings from closed-ended questions and categories and sub-categories derived from a conventional content analysis of open-ended questions.

5.2.1 Study Population

A list of potential participants was developed through a systematic web search conducted between 5 January and 27 April 2017. The search was designed to identify programs and individuals in the United States that use the arts as a means for health communication. The scope of the search included program websites, publications in related field journals, and field conference abstracts.

The search was designed to identify an initial cohort to use within the non-probability snowball sampling approach (Griffith et al., 2016; Tyrer & Heyman, 2016; Ruel et al., 2015). In this approach, members of an initial population identify other members of the population, creating a chain of referral. The process begins with the researchers identifying a small number of the target population and then obtaining referrals from these individuals. The process continues in waves to expand the sample. Snowball sampling can be problematic in that the first cohort of participants can heavily influence the nature of the sample (Ruel et al., 2015, Wagner & Gillespie, 2018). A larger and more diverse, or representative, initial cohort can help reduce this bias and broaden the sample. Snowball sampling is one of the most commonly used qualitative research sampling methods (Hardon et al., 2004; Griffith et al., 2016).

5.2.2 Systematic Web Search

A systematic web search was conducted between 5 January and 27 April 2017. The search was designed to identify arts-based health communication programs run by organizations including not-for-profits, for-profits, academic institutions, non-governmental (NGO) and
governmental organizations, private foundations, public/community health organizations, arts, culture, community service and faith-based organizations, and schools. The following definitions, derived from standard dictionary sources and the literature, guided the search.

Arts:
- Imaginative, creative, and nonscientific branches of knowledge considered collectively, especially as studied academically (British Dictionary)
- The class of objects subject to aesthetic criteria (dictionary.com)
- The expression or application of human creative skill and imagination (Oxford Dictionary)
- Modalities that create or facilitate the creation of works to be appreciated primarily for their beauty or emotional power (Shiner, 2001)
- Forms of expression, including the visual, performing and literary arts, which may include drama, music, writing, visual arts, dance, and any interdisciplinary, multidisciplinary, or sub-disciplinary component (Sircello, 2015).

Artist:
- A person who produces works in any of the arts that are primarily subject to aesthetic criteria (dictionary.com)
- A person who practices or is skilled in an art, such as painting, drawing, or sculpture (British Dictionary)
- A person who displays in his work qualities required in art, such as sensibility and imagination (British Dictionary)
- A person whose profession requires artistic expertise, such as a designer (a commercial artist) (British Dictionary)

Health communication:
• A two-way exchange of information that seeks to make health-related evidence interpretable, persuasive, and actionable (McCormack et al, 2013)

• Communication that seeks to inform, influence and support individual and community decisions that affect health (Freimuth & Quinn, 2004)

• Communication inclusive of a health messaging intent to convey vital health information to a target population of people via healthcare and public health workers, governmental agencies, or others.

• Formats may include visual, audio, narrative, personal, artistic, media-based, social, and other forms of communication

Arts-based health communication programs:

• Programs that use the arts, as defined above, to facilitate health communication, as defined above

• May be developed and implemented by public health, community health, health, arts, community, cultural, or other organizations, or through partnership between them

5.2.2.1. Search Procedures

Searching was undertaken through the PubMed database, which is a commonly used database for arts in health literature searches, and the field journals Health Communication, Arts & Health: An International Journal for Research, Policy and Practice, Journal of Applied Arts and Health, International Journal of Health Communication, Research and Drama Education, Applied Theatre Research Journal, Journal of Arts in Communities, and the Journal of Applied Theatre and Performance. The specific journal searches and web searches yielded significant findings, while the first database search yielded only two on-target returns. Therefore, no additional databases were used in the search.
These searches were supplemented with grey literature and hand searching using specific keyword searches in Google and Google Scholar, and with searches of American Public Health Association conference abstracts. Finally, a snowballing method of reference list searching (Wohlin, 2014; Jalali & Wohlin, 2012) was applied to relevant articles identified in field journals to identify additional programs (Streeton et al., 2004; Greenhalgh & Peacock, 2005). The following inclusion and exclusion criteria were applied to the search.

Inclusion Criteria:

- Programs that are currently running or had activity within the past two years (2015-present)
- Programs that have a clear and significant focus on health issues or health-related social issues
- Programs that operate from a health communication mission or objective in a public health context
- Programs that are created with the intent to make or use forms of art as a means for health communication
- Programs that involve professional artists or a clearly defined arts practice
- Programs that are located in and serve populations in the United States
- At least one individual directly involved with the program must be able to complete the survey in English
- Must be 18 years of age or older

Exclusion Criteria:

- Programs that concluded activity or operations more than two years ago (before 2015)
• Programs that do not have a clear and significant focus on health issues or health-related social issues
• Media or social media campaigns that are not developed specifically as works of art or arts processes
• Programs located or serving populations outside of the United States
• Individuals unable to complete the survey in English
• Under 18 years of age

5.2.2.2. Search Terms

The keyword search terms were developed from an array of relevant arts terms, Boolean search terms and other conjunctions, relevant health/public health terms, and several nested terms (see Appendix F for search protocol and results by source). The search terms were tested, refined and applied to the PubMed search as well as the grey literature search.

5.2.2.3. Search Results

Of a total of 1,820,178 search returns, 696 websites/programs were determined to be potentially on topic based on the program name. An initial screening process looked for programs that met two of the inclusion criteria:

• Programs that have a clear and significant focus on health issues or health-related social issues
• Programs that are created with the intent to make or use forms of art as a means for health communication

This initial screening resulted in the exclusion of 567 programs. Of the remaining 129 returns, 33 programs did not meet the full inclusion criteria and were excluded. From the 96 programs that met the criteria, a list of 214 individuals who work in those programs as artists or
public health or health communication professionals was developed. These individuals were associated with 96 different programs (see Figure 5.1 below). The 214 potential participants identified in the search served as the initial cohort within multi-method sampling approach, with purposive sampling followed by snowballing, and were invited via e-mail to complete the online survey. Within the survey, participants were asked (not required) to provide names of other programs and/or professionals who use the arts in health communication programs. An additional 12 individuals were identified in this way, resulting in a total potential participant base of 226 individuals.

Figure 5.1

Prisma Flow Diagram
5.2.3. Survey Administration

A list of names and e-mail addresses was compiled from the search. These potential participants served as the initial cohort within the snowballing approach and were invited via e-mail to complete the online survey. As noted above, within the survey, participants were asked (not required) to provide names of other programs and/or professionals who use the arts in health communication programs. These individuals were then invited to participate in the survey. Although the total population of individuals who use the arts as a means for health communication in the United States cannot be quantified, there is no reason to believe that the
systematic search and snowballing approach did not create a meaningfully representative sample of arts-based health communication programs in the United States (Ruel et al., 2015, Wagner & Gillespie, 2018; Griffith et al., 2016, Morris et al., 2017).

The 18-question online survey was designed to elicit perspectives from public health professionals and artists who work on health communication programs regarding how the arts are instrumental in their work (see Appendix G). The online format was deemed most suitable due to availability of e-mail addresses, as opposed to mailing addresses of potential participants, time and cost efficiency, real-time data tracking, and suggestions that health professionals may respond more readily to web-based surveys than mail surveys (Braithwaite et al., 2003). The survey was developed in the online Qualtrics system and presented in two parts.

Part one asked participants to answer questions about themselves and their work, including over what period of time they have had relevant experience, how often and in what types of communities they use the arts for health communication, their professional roles, information about their organization, and the types of art forms they use. These variables were included to ensure that respondents would be placed into the correct comparison groups (public health professionals, arts professionals), to provide information that could be considered for further comparison, and to contribute to subsequent data collection steps.

Part two of the survey asked about their perspectives regarding the arts and health communication, including why they use the arts, what associations they make between the arts, self-efficacy and behaviour change, and on what evidence they base those associations. Participants were also given the option to provide their name and contact information so that they might be contacted in the future about participating in a more in-depth interview.
The survey was designed to provide the elements of informed consent within the welcome screen, indicating that by beginning the survey, participants granted their informed consent to participate in the study. Eight questions were multiple-choice (some with “other” fields additional information); three additional multiple-choice questions provided space for significant open-ended responses to explain the choice; four questions provided fields for input of specific information, such as names of individuals or programs; and an additional three questions were open-ended. The survey was designed to garner both quantitative and qualitative information.

The survey was pre-tested with 14 individuals who were representative of the target population and had experience or familiarity with using the arts for health communication. These individuals were recruited from the staff and student body of the University of Florida and completed the survey at a specified time and location on the University of Florida campus. The pretest confirmed that the survey questions were unambiguous, consistently understood, and mutually exclusive, and also confirmed the range of time (6-12 minutes) that the survey would take respondents to complete. In a focus group format, pretest participants were asked to provide general feedback on the administration, organization, and content of the survey in a group debriefing. As a result of this input, minor changes were made to the survey.

The survey was then piloted with members of the target population. The survey was sent to 19 randomly selected members of the target population, and ten of these individuals completed the survey. Analysis of the responses did not identify any technical or other issues, and so no further follow up with respondents (which was deemed an unnecessary burden) or changes to the survey instrument were undertaken. The data from these respondents were included in the analysis.
The survey was sent via e-mail to the list of 214 individuals identified in the search. Over four weeks, from 6 September to 5 October 2017, three e-mail reminders were sent to those who had not included their name within the survey (per the choice provided, as noted above). New survey invitations were sent each week to individuals who were identified through the snowballing process. The survey was open from 6 September to 21 December 2017.

5.2.4. Data Analysis

Both quantitative and qualitative analyses were conducted. Survey data were collected and stored in the University of Florida Qualtrics interface, and the Qualtrics system was used for the quantitative analysis of the closed-ended questions. Basic descriptive statistics were generated, and cross tabulation was used to create tables for cross-comparisons across the arts professionals and public health professionals groups.

A conventional content analysis was conducted to develop categories and sub-categories from the qualitative open-ended question responses. In the content analysis, the doctoral researcher conducted open line-by-line coding and categorization of the data. A team of research assistants also conducted open line-by-line analysis of the open-ended responses and engaged in consensus-building amongst themselves to develop a set of codes. These codes were used by the doctoral researcher for triangulation and to reduce bias in the findings. In this triangulation process, the doctoral researcher used the codes created by the research assistants to consider the accuracy of her codes, and to stimulate thinking about any biases that may have contributed to inaccurate representation of participant comments in the coding process. As a result of this triangulation, some changes were made to the doctoral researcher’s codes. After the final set of codes was developed, categories and subcategories were developed by the doctoral researcher.
The codes were quantified to garner an understanding of trends and to support the development of the primary categories.

5.3. Results

Invitations to participate in the survey were sent to a total of 226 individuals, including 214 from the original cohort list and 12 individuals identified in the snowballing process. Forty-one invitations were returned as undeliverable and two people asked to be removed from the list, one specifying that they did not do arts-based health communication work. It is estimated that 185 invitations were successfully delivered to the intended recipient, resulting in a response rate of 38%. A total of 97 people started the survey. Twenty responses that were <40% incomplete were removed from the analysis so that 80% (n=77) of survey responses were analyzed. The 40% cut-off was determined based on the assumption that individuals who were unable to complete at least 60% of the survey may have lacked enough experience to provide reliable information. Additionally, responses to certain questions were necessary for cross-tabulations and comparison in the analysis. Eleven individuals responded directly to the e-mail invitation with notes either expressing enthusiasm and appreciation for the study or requesting that results be shared with them. Each question was analyzed based on the number of responses to that particular question; thus, denominators are varied for each question.

5.3.1 Demographics and Quantitative Results

Some demographic information was necessary for understanding the experiences of the respondents and for screening participants for potential participation in the focus groups. It was also necessary in providing a basis for constant comparisons. The survey was completed by a range of professionals. The majority, 58% (n=45), were arts professionals, while 42% (n=32)
were public health professionals. The most commonly reported professional role was program administrator (29%, n=22) (see Figure 5.2).

**Figure 5.2**

*Professional Roles*¹

The majority of arts professionals were affiliated with arts organizations, and the majority of public health professionals were affiliated with universities. However, 16% (n=12) of public health professionals were affiliated with arts organizations, and 13% (n=10) identified also as artists; and 11% (n=8) of arts professionals were affiliated with public health or health organizations. Overall, the majority of respondents (43%, n=33) were affiliated with arts organizations, followed by 32% (n=25) who were affiliated with local non-profit organizations, 31% (n=24) affiliated with universities, and 26% (n=20) affiliated with community health organizations.

All respondents had at least one year of experience in doing work related to health communication, and eight percent (n=6) reported having more than thirty years of experience.
Arts professionals had significantly less collective experience. The majority of arts professionals had 5-10 years of experience, while the majority of public health professionals had 16-20 years.

**Figure 5.3**

*Experience with Health Communication Work*

When asked how often they had been a part of an arts-based health communication program over the past five years, 41% (n=32) responded “always”, while 40% (n=31) responded with “often (more than five times)”. The majority of respondents do this type of work in urban communities. Arts professionals reported less programming in suburban and rural communities than public health professionals (Figure 5.4).

**Figure 5.4**

*Types of Communities in Which Arts-Based Health Communication Takes Place*
The primary objectives of these arts-based health communication programs spanned a broad range, most notably community engagement, health education, and wellness (Figure 5.5).

**Figure 5.5**

*Primary Objectives of Arts-based Health Communication Programs*
Live theatre, visual arts and film were reported to be the most commonly used art forms in these health communication programs. Arts professionals use live theatre most commonly (73%, n=56) and public health professionals use the visual arts (53%, n=41) nearly as often as live theatre (56%, n=43) (Figure 5.6).

**Figure 5.6**

*Art Forms Used in Health Communication Programs*

When asked why they use the arts in their health communication programs, public health professionals generally responded with more reasons than arts professionals (Figure 5.7).

**Figure 5.7**

*Reasons for Using the Arts in Health Communication Programs*
Note. This table shows the percentages of people in each professional group who use the arts for these reasons.

Additionally, public health professionals were more likely than artists to use the arts to reach target populations, communicate with low-literacy populations, attract attention and generate excitement, simplify and clarify health messages, and to facilitate self-efficacy and behaviour change. Of public health professionals who responded to this question, 72% (n=23) use the arts to facilitate self-efficacy, and 66% (n=21) use the arts to facilitate behaviour change.

5.3.2 Content analysis of open-ended questions

Six survey questions allowed respondents the opportunity to provide narrative input related to their understandings and views. Four of these provided space for explaining responses to multiple-choice questions; one asked respondents to provide web links to evidence of
associations between the arts, self-efficacy, readiness for behaviour change, and behaviour change in their work, such as evaluation or research results, participant comments or behaviours, or other outcomes; and one asked respondents to list theoretical foundations, frameworks, constructs or models that inform their use of the arts for health communication.

5.3.2.1 Distinguishing art from entertainment in health communication programs

Fifty-four people responded to the question, “In your approach to using the arts for health communication, do you distinguish art from entertainment?” Among them, 50% (n=27) said yes, 43% (n=23) said no and 7% (n=4) said they did not know. However, four of those who selected no and one who selected “I don’t know” clearly articulated in the narrative response that they do distinguish between entertainment and art in their approach. Of the 54 respondents, 57% (n=31) offered perspectives that distinguished art from entertainment, with a higher proportion of arts professionals than public health professionals making this distinction (58%, n=32 and 47%, n=25 respectively).

Those who distinguished arts from entertainment commonly noted that they utilize entertainment as a means for engaging people in the works of art they create. However, several (N=5) emphasized specifically that entertainment is not the purpose or goal of their work, and respondents often described art in terms of how it exceeds or surpasses entertainment as a means for health communication. For example, one public health professional stated, “Our purpose is not to entertain, but to facilitate opportunities for health information/knowledge to go from the head to the heart.”

Two primary themes were derived from the narrative responses of those who differentiated between the arts for health care and entertainment: engagement and dialogue. Most comments in this category were coded for engagement. Engagement was described in terms of
emotional engagement, creative process, heightened thoughtfulness, deeper thinking, interaction, reflection, active engagement, challenge, and entertainment. Some respondents in this category created associations between arts and active engagement and between entertainment and passive engagement. For example, one arts professional noted, “Art (and hands-on making) is a tool for developing dialogue and, critically, not just enjoyment or passivity.” Another public health professional stated, “Our work is clearly defined as arts integration, an approach to education (not entertainment) engaging people in a creative process that links health to an art form.”

There was also a clear pattern of utilization of the arts as a means for facilitating dialogue. Respondents noted that they use art to communicate concepts, to facilitate deeper thinking, to challenge audiences and to facilitate active dialogue. Several respondents described how arts-based programs, as opposed to entertainment-based programs, can deliver information with greater precision. For example, an arts professional stated, “Our ultimate goal is to raise awareness, educate or disseminate knowledge of specific health messaging that supports [organization name] initiatives. Art for entertainment leaves too much for interpretation.” And, another one noted, a public health professional, “Our aim is to engage the arts as tailor-made, embodied forms of cognition and learning to enhance outcomes (i.e. behaviour change).”

Comments of those who said that they do not differentiate between aesthetic experience and entertainment were less descriptive in general, and focused on the ability of entertainment to accomplish broad reach and the challenge or futility of differentiating between art and entertainment. Several respondents stated that program participants were the only ones who could make a differentiation between art and entertainment, or that participants could not perceive the difference. Those in this category consistently recognized that art can be entertaining.
Among the 26 individuals who selected “no” or “I don’t know” for this question, four negated this choice in their explanation, demonstrating that they do recognize a differentiation between the two. An arts professional stated:

The reason we use the arts to do this work is to connect youth more deeply to the messages, to make it relevant to them and their life experiences, and to stimulate further dialogue. Our intention is not primarily to entertain; our intention is to create a piece of art that provokes people to dig deeper into a topic. We do have to consider making art that engages them, interests them, and even makes them laugh - but the primary goal isn't entertainment - the primary goal is to connect with them so they can empathize with our characters and stories to hear the message in a meaningful way.

Each of the themes derived from the comments to this question was associated either with art or with entertainment. As shown in Table 5.1 below, when placed side-by-side, these associations suggest some contrasts that represent the respondents’ understandings.

**Table 5.1**

*Thematic Associations with Art and Entertainment*

<table>
<thead>
<tr>
<th>Art</th>
<th>Entertainment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Engagement</td>
<td>Passive Engagement</td>
</tr>
<tr>
<td>Emotional Engagement</td>
<td>Humour</td>
</tr>
<tr>
<td>Expression, Deep Thought, and Dialogue</td>
<td>Broad Reach</td>
</tr>
<tr>
<td>Understanding</td>
<td>Education</td>
</tr>
<tr>
<td>Challenging</td>
<td>Accessible and Relatable</td>
</tr>
</tbody>
</table>
Despite these apparent associations, respondents also frequently recognized the similarities and the relationship between art and entertainment, noting that art can be entertaining and that entertainment can also be art.

5.3.2.2 Perceived relationships between the arts, self-efficacy, readiness for behaviour change, and behaviour change

When asked if they observed relationships between the arts, self-efficacy, readiness for behaviour change, and behaviour change in their work, and given “yes”, “no” and “I don’t know” as response options, 98% of respondents (n=65) replied “yes” and one responded “no”. Respondents were also given the option to explain their responses, and 47 people chose to do so. Fifteen of the comments referred specifically to behaviour change, while eight referred to self-efficacy, and five referred to readiness for behaviour change. One arts professional explained, “An artistic experience is a catalyst that makes a change in attitude, which opens the door for a change in knowledge, that affects a belief and provokes a change in action!” A public health professional specified that “the arts appeal to one's emotions which often override intellect when it comes to behaviour”. And, another public health professional noted, “I have seen policymakers make policy decisions after participating in an arts-based (theatre) experiential learning exercise.”

5.3.2.3 Evidence of associations between the arts, self-efficacy, readiness for behaviour change, and behaviour change

Survey participants were asked what evidence, if any (such as evaluation or research results, participant comments or behaviours, or other outcomes), they have seen that their programs support associations between the arts, self-efficacy, readiness for behaviour change, and/or behaviour change. The survey allowed respondents to list evidence for each of the
potential associations, and respondents were invited to include links to published documents or websites. Of 68 respondents, 38% (n=26) cited evidence for associations between the arts and self-efficacy; 37% (n=25) cited evidence for associations between the arts and readiness for behaviour change; and 28% (n=19) cited evidence between the arts and behaviour change.

There were some notable differences in the sources and types of evidence cited by public health professionals and arts professionals. Arts professionals cited significantly more anecdotal evidence across all three areas (self-efficacy, readiness for behaviour change, and/or behaviour change), while public health professionals cited higher use of pre- and post-measures and more evidence in general related to readiness for behaviour change (Figure 5.8).

**Figure 5.8**

*Sources of Evidence for Associations between the Arts, Self-efficacy, Readiness for Behaviour Change, and Behaviour Change*
In their narrative entries, respondents provided the methods they use to obtain evidence, including surveys, pre-and post-measures, as well as various types of anecdotal evidence such as observations and participant comments. As shown in Figure 5.8 above, some noted when evaluations were undertaken; those evaluations may have included surveys or pre-post measures. They also noted types of outcomes evidenced, such as changes in knowledge, attitude, readiness or intent for behaviour change, and behaviour change. Three respondents provided links to published research or evaluation reports. While these reports provided interesting examples, they were not used in the analysis. The majority of evidence cited in reference to self-efficacy was anecdotal, while the majority of evidence cited for readiness for behaviour change and behaviour
change was garnered through surveys and pre- and post-measures. Overall, more evidence was cited in relation to the assessment of behavioural outcomes than self-efficacy or readiness for behaviour change by both arts and public health professionals.

5.3.2.4 Learning from experience

Several themes emerged from respondents’ reflections on what they have learnt from using the arts in their health communication programs. A general theme related to the instrumentality of art touches upon several subsequent themes but is an important concept in itself.

**Art is instrumental.** Respondents described the instrumentality of art in regard to an array of constructs and outcomes. One arts professional shared, “I have learned that art is a powerful tool. It can make tangible that which is intangible. It can help the viewers feel and understand.” One public health professional described art and aesthetic experience as not just instrumental, but essential, asserted that, “It [art] is critical. You cannot communicate messages that you want to change behaviour by using data or information, no matter how compelling it is, without connecting it to an aesthetic experience or an experience that involves spectacle.”

Several respondents noted that the memorable nature of art contributed to its usefulness. One arts professional noted that, “Conveying messages artfully, I believe, leaves indelible images that ideally will remind the viewer of the information when needed at a later date.” And, the ability of art to provide social modeling was also noted. A public health professional stated, “I believe theatre is a strong social modelling technique that not only helps individuals consider their health choices, but promotes empathy to others.”

The narrative responses brought forward respondents’ beliefs that the arts are a useful means for enhancing the likelihood of behaviour change among their program
participants. They use the arts because they understand their instrumentality in relation to emotional engagement, retention of information, facilitation of dialogue, and modelling of health-supporting behaviours. Several specific themes emerged from the data, as exemplified by the following participant comments.

**Art engages people emotionally.** The usefulness of emotional engagement appeared as a common understanding upon which both arts and public health professionals crafted arts-based health communication programs. One public health professional specified:

The arts, as they appeal to one's emotions, are necessary to include in any health communication program. Emotions can override intellect (e.g. a person knows that eating sweets in excess is not good for them, but they choose to do so because it tastes and feels good). It's important to address how emotions affect our behaviours. Another public health professional asserted that, “You must engage the heart to have a lasting impact.”

**Art facilitates dialogue.** Respondents described an understanding that engagement in an arts experience can broaden people’s consideration of and thinking around issues and can also be instrumental as a means of facilitating dialogue. A public health professional shared that “…creativity in a visual message can draw in the viewer and open conversation about a health topic in a way text rarely can. Art should be a bigger part of health communication.” Another public health professional asserted that art “creates a catalyst for thinking and reflecting and is a good conversation starter”. And, another noted that they had created a sculpture for a school community to “foster conversations about mental health.”

**Art models and allows rehearsal of behaviours.** The notion that arts practices, theatre in particular, can allow program participants to practice or rehearse health behaviours was
prevalent in the narrative comments. One public health professional stated, “I observe that theatre, creative writing and spoken word are effective means of rehearsing healthy behaviour, problem-solving with regard to healthier lifestyles, choices or coping strategies, expressing one's views, creating a sense of self and a sense of community and solidarity with others.” And, an arts professional offered that:

Using theatre as a violence prevention tool allows the audience to see their lives on stage…. It allows them to try out new language, and seek new outcomes they might not have tried, or be ready for in their own lives. It allows connection, empathy building, and skill-building without the risk that comes in real-life settings.

5.3.2.5 Theoretical foundations, frameworks, constructs or models that inform the use of the arts for health communication

Numerous theoretical constructs and models were listed in this open-ended question as informing participants’ work. Those with more than one occurrence in the data are presented in Table 5.3 below. The theoretical foundations, frameworks, constructs and models that were cited fell into two primary categories, with the majority of the constructs used falling under the category of social and behavioural theories and models. Those that were cited more than once are included in the table below (Table 5.2).

**Table 5.2**

*Theoretical Foundations, Frameworks, Constructs and Models used by Respondents*

<table>
<thead>
<tr>
<th>Public Health/Health Sciences Theories/Frames/Models</th>
<th>Arts Theories/Frames/Models</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Cognitive Theory</td>
<td>Theater of the Oppressed</td>
</tr>
<tr>
<td>Socioecological Model</td>
<td>Arts Integration Model</td>
</tr>
<tr>
<td>Social Norms Theory</td>
<td>Pedagogy of the Oppressed</td>
</tr>
</tbody>
</table>
Extended Parallel Process Model        Narrative Theory
Transtheoretical Model          Theatre in Education
Positive Youth Development      Applied Theatre
21st Century Learning Skills
Strengths-based Framework
Calgary Charter on Health Literacy

Overall, arts professionals brought forward eleven different theories, frameworks or models from the theatre domain, three from the educational domain, four from public health, two from health, and two from the arts domain. Public Health professionals brought forward 14 different theories, frames or models from the public health or health sciences domain, three from theatre, two from the arts generally, and one from the educational domain. Three of the five public health/health sciences theories brought forward by arts professionals were referred to incorrectly (incorrect words used in the references to the theories) (Figure 5.9).

Figure 5.9

Domains of Theories, Frameworks and Models Utilized, by Profession

5.3.2.6 Additional comments
A final question allowed participants to note if there was anything else “we should have asked you, or that you would like us to know, about your work in that you would like us to know”. Fourteen people made substantive comments in response to this question. These comments included general enthusiasm, interest in collaboration and connection to other professionals doing this kind of work, and a need for research. One public health professional shared:

…what interests me is how much I have changed and how the arts have changed me as a public health professional. When I first started practicing public health, I felt data should not be diluted with a story or art. And now I feel that art is critical for every aspect of public health - risk communication, information transmission, intervention, etc. We must engage the heart to engage the mind - no matter how intellectual a person or target group is - art is what will create lasting change. Public health is my art now. I am no longer a public health professional. I am a public health artist.

Several respondents also used the space to share additional information about their programs.

5.3.2.7. Categories and Sub-categories

The content analysis of the narrative data resulted in the development of three primary categories of themes – engagement, interaction, and growth and change. Figure 5.10 below presents these categories, along with the resulting sub-categories.

Figure 5.10

Categories and Sub-categories
**Engagement.** The engagement category encompasses an array of concepts, most notably emotional engagement, character involvement, narratives, modelling of behaviours and rehearsal for life. Live radio and television drama were highly represented in the data, and are reflected in the sub-categories. Interactive theatre forms were recognized as being a particularly useful format for engaging participants in emotional, embodied and personally and culturally relevant ways. For example, one arts professional explained, “Our research over the past 25 years demonstrates that students listen when they can relate to the characters' stories. This builds a trust that allows discussion on more sensitive topics.” Similarly, a public health professional noted, “Showing young people a situation they recognize with characters they know always promotes discussion, which leads to reflection and change in some.”

Respondents also talked about how useful narrative- and visual arts-based art forms are for facilitating modelling and rehearsal of behaviours. One arts professional noted, “Theatre provides the opportunity to 'rehearse for life' - exploring narratives, re-writing narratives, modelling behaviour, developing self-efficacy and self-awareness, developing and growing community support structures.” And, another public health professional shared, “Modeling is a key component of self-efficacy to enact behaviour change, and the arts can be a mechanism for modelling.” Other art forms, including music, film, and the visual arts, were also frequently noted. In particular, the visual arts programs were often noted as being used to model concepts.
Interaction. The opportunities that the arts provide for active participation and interactivity were articulated by respondents. The ability of the arts to facilitate dialogue and communication was recognized to be a significant advantage in health communication programs. Respondents noted that the arts not only facilitate participation, dialogue and communication but also cultivate trust and support. One arts professional noted, “The arts help build rapport, connection, social-emotional-cognitive learning, increase self-worth and inspire participants to actively step up as advocates for their own health.” And another arts professional stated, “Visual art messaging and creating art in a workshop setting facilitates positive outlooks and dialogue that can encourage new thinking and behaviours.”

Growth and Change. Respondent comments, particularly those of arts professionals, frequently linked engagement and interaction with growth and change among program participants. One arts professional noted, “Our theory of change articulates that an artistic experience can help one be open to new ideas, have better retention, and inspire a behaviour change.” Another stated, “An artistic experience is a catalyst that makes a change in attitude, which opens the door for a change in knowledge, that affects a belief and provokes a change in action!” Numerous dimensions of growth and change were brought forward, including knowledge, understanding, skills, ideas, openness, attitudes, awareness, self-esteem, and beliefs.

This study resulted in a set of descriptive statistics and constructs (the categories and sub-categories) that were used in the overarching explanatory sequential mixed methods grounded theory study’s data integration phase. Those are presented in Table 5.3 below.

Table 5.3

*Summary of Results: Descriptive Statistics and Constructs*
• Live theatre is the most commonly used arts modality among both arts professionals used (73%) public health professionals (56%)
• 68% of arts and public health professionals use the arts for community engagement
• 66% of arts and public health professionals use the arts to promote wellness
• 66% of arts and public health professionals use the arts for health education
• 91% of public health professionals use the arts to engage people emotionally
• 84% of public health professionals use the arts to facilitate awareness of issues or concepts
• 84% of public health professionals use the arts to attract attention or generate excitement
• 78% of public health professionals use the arts to facilitate dialogue
• 72% of public health professionals use the arts to facilitate self-efficacy
• 72% of public health professionals use the arts to facilitate readiness for behaviour change
• 66% of public health professionals use the arts to facilitate behaviour change
• 98% of arts and public health professionals have observed relationships between the arts, self-efficacy, readiness for behaviour change, and behaviour change in their work

<table>
<thead>
<tr>
<th>Categories and Sub-categories</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Engagement</strong></td>
</tr>
<tr>
<td>• Emotional Engagement</td>
</tr>
<tr>
<td>• Character Involvement</td>
</tr>
<tr>
<td>• Modelling/Illustrating</td>
</tr>
<tr>
<td>• Self-reflection</td>
</tr>
<tr>
<td>• Self-expression</td>
</tr>
<tr>
<td>• Rehearsal for Life</td>
</tr>
<tr>
<td>• Embodiment</td>
</tr>
<tr>
<td>• Challenge</td>
</tr>
<tr>
<td>• Narrative</td>
</tr>
<tr>
<td><strong>Interaction</strong></td>
</tr>
<tr>
<td>• Dialogue</td>
</tr>
<tr>
<td>• Participation</td>
</tr>
<tr>
<td>• Communication</td>
</tr>
<tr>
<td>• Trust</td>
</tr>
<tr>
<td>• Support</td>
</tr>
<tr>
<td><strong>Growth &amp; Change</strong></td>
</tr>
<tr>
<td>• Knowledge</td>
</tr>
<tr>
<td>• Understanding</td>
</tr>
<tr>
<td>• Skills/mastery</td>
</tr>
<tr>
<td>• New ideas</td>
</tr>
<tr>
<td>• Openness</td>
</tr>
<tr>
<td>• Attitudes</td>
</tr>
<tr>
<td>• Awareness</td>
</tr>
<tr>
<td>• Self-esteem</td>
</tr>
<tr>
<td>• Beliefs</td>
</tr>
</tbody>
</table>

5.4 Conclusion

In relation to arts-based health communication programs, recognition of relationships between the arts, self-efficacy, readiness for behaviour change, and behaviour change is common among both arts and public health professionals. Among all survey respondents, 98% have observed these relationships. The descriptive statistics derived from closed-ended questions align with the themes that emerged from open-ended questions. In both the quantitative and qualitative findings, it is evident that the relationships between the arts, self-efficacy, readiness for
behaviour change, and behaviour change observed by arts and public health professionals guide intentional utilization of the arts to facilitate engagement, interaction, and growth and change among program participants.

Narrative was a notable sub-category in relation to the uses of the arts in the health communication programs described by respondents. Several dimensions of narrative, including the relatability of characters and opportunities for modelling and rehearsal for life, were frequently described. Overall, respondents expressed a consistent understanding of the usefulness of the arts in health communication programs. The survey suggests that, while both groups recognized and articulated connections between the arts, aesthetic experience, self-efficacy and behaviour change, the use of the arts in health communication programs among both arts and public health professionals may not be well informed by theoretical frames or conceptual models.

The results of this study suggested a need for more in-depth exploration of the relationships between the arts, aesthetic experience, self-efficacy and behaviour change perceived by arts and public health professionals who use the arts in health communication programs. Additionally, the doctoral researcher recognized the need for input from people who participate in these programs. As a result, the next iterative stage of data collection was a series of focus groups with arts professionals, public health professionals, and arts-based health communication program participants. Chapter 6 will present this focus group study. Additionally, as noted above, the descriptive statistics and constructs derived from this study were used in the overarching explanatory sequential mixed methods grounded theory study’s data integration phase, as will be presented in Chapter 7.
Chapter Six: Study Three: Focus Groups

6.1. Introduction

The primary aim of the focus group study was to investigate and identify potential linkages between arts engagement, aesthetic experience, self-efficacy, and health-related behaviour change in arts-based health communication programs. The study sought to identify and examine the understandings of three groups of people who engage in arts-based health communication programs – public health professionals who use the arts for health communication, arts professionals who create or work in public health programs, and participants in arts-based health communication programs.

As described in Chapter 3, section 3.2.3.2., the focus group format was used to optimize dialogue and to deepen consideration of topics and dialogue beyond what might have occurred in a one-to-one interview format (Leavy, 2014). The group, or collective, unit of analysis was of particular interest at this stage of the overarching grounded theory research, as the dialogic process and patterns of consensus and dissent were useful in allowing participants to deepen their theoretical considerations as they reflected on and shared their experiences through discussion and storytelling. The discussion guides used for the focus groups were designed to facilitate deeper consideration among participants not only of how they viewed the relationships between arts engagement, aesthetic experience, self-efficacy, and health-related behaviour change, but how they had operationalized their understandings in practice, and the results they had observed. Survey data that had been collected previously provided a useful comparison to the dialogic data.

Social Cognitive Theory and the Transtheoretical Model were utilized as theoretical frames in the focus group study design and script development. These theories emphasize self-
efficacy and stages of behaviour change, respectively. Social Cognitive Theory, which is one of the theories included in the overarching study and overviewed in chapter four, asserts that if a person has confidence in their ability to undertake the actions needed to achieve a particular goal, they may be more likely to apply their skills in relation to health decisions and behaviours. Social Cognitive Theory is frequently referred to in the literature as “the most commonly used health behaviour theory” (Kadir & Rundle-Thiele, 2019, p. 3).

While the Transtheoretical Model (TTM) is not included in the overarching study’s data set, it was used in the design of the focus group discussion guide. TTM provides a process model for anticipating and explaining people’s behaviours across six stages of change - pre-contemplation, contemplation, preparation, action, maintenance, and termination (Prochaska et al., 2015; Prochaska & DiClemente, 1986). Based on some references to these stages of behaviour change in survey responses, the readiness for behaviour change stage was explored in the focus group discussions.

Additionally, the design of the focus group study was informed by the current literature on aesthetic experience, several validated instruments used to assess self-efficacy and aesthetic experience, and this study’s survey data (Bandura, 2006; Chung et al., 2016; Gruber-Baldini et al., 2017; Luszczynska et al., 2005; Madsen et al., 1993; Schindler et al., 2017; Tröndle et al.; 2014; Stamatopoulou, 2004).

A grounded theory coding approach was chosen to provide a deeper understanding of the programs by preserving the actions in the participants’ statements, rather than reducing them to concepts. The grounded theory approach preserves action by using gerunds and fuller statements as codes, allowing the researcher to stay closer to the original data throughout the analysis (Charmaz, 2014). A context-mechanism-outcomes (CMO) analysis was employed to identify
relationships and connections between the context, mechanisms and outcomes of the arts-based health communication programs that were explored in the focus groups. CMO analysis is designed to help enhance understanding of how a program activates specific mechanisms in obtaining desired outcomes (Jackson & Kolla, 2012; Pawson & Tilley, 1997), and was useful in deepening the exploration of not only occurrences but also patterns and relationships between constructs in the data.

Following ethics approval from Ulster University Faculty of Arts Research Ethics Filter Committee and Institutional Review Board (IRB) approval from the University of Florida, a total of seven focus groups were conducted. Three focus groups comprised public health professionals who use the arts in their health communication programs, two comprised professional artists who work in health communication programs and two comprised participants in arts-based health communication programs. Separate groups, rather than groups including each type of professional and program participants, were used to optimize the depth of discussion that might take place across the more similar experiences. The groups were conducted in New York City, New York, USA, Los Angeles, California, USA, and Denver, Colorado, USA, between April and December of 2018. The groups were held in comfortable rooms separated from the general public, and refreshments were provided.

6.2. Methods

6.2.1. Recruitment Methods

A list of potential participants for the focus groups with professionals was developed through the survey conducted with professionals engaged in arts-based health communication programs in the U.S. The list of potential survey participants was developed through a systematic search of published literature, relevant conference abstracts, journal articles, and public Internet
sites. A snowballing approach was also used to expand the list. E-mail invitations to participate in the survey were sent to 226 individuals. The survey served as a screening instrument for the focus group study. Survey responses from 77 individuals were analyzed, and lists of potential participants for the two focus groups with professionals was developed from respondents. Based on the physical locations of those who expressed interest, three geographic locations were chosen for the focus groups, and all who expressed interest in each area were invited to participate in a group. This list was supplemented with names of individuals from the survey invitation list in those areas who did not complete the survey, and with specific recommendations provided by survey participants in the snowballing process. These individuals were invited via phone or e-mail to participate in the focus groups. The prevalence of survey respondents in three geographic locations led to the selection of Los Angeles, New York, and Denver as the most relevant locations for the focus groups.

Professionals who were invited to participate in the focus groups in Los Angeles and Denver were asked to share a focus group invitation with adults who had participated in their programs within the past three months. With the permission of those they identified, the professionals shared names and e-mail addresses with the doctoral researcher, who followed up with a formal invitation, consent form and instructions for participation (i.e. time and location). Program participants were provided with a $20 Amazon gift card to help offset time and travel expenses.

6.2.1.1 Inclusion and Exclusion Criteria

The following inclusion and exclusion criteria were used in the recruitment and enrollment processes:

Inclusion Criteria:
Adults over 18 years of age

Literate in English: the focus groups will only be conducted in English

Involved as a professional in arts-based health communication programs, OR

Involved as a participant in the past three months in an arts-based health communication program

Exclusion Criteria:

Under 18 years of age

Non-literate in English: the focus groups will only be conducted in English

No professional experience with arts-based health communication programs OR

No participation in an arts-based health communication program within the past three months

Written informed consent was obtained from all participants either in advance of or at the start of each group. Participants were also asked to complete a short information sheet that screened for inclusion/exclusion and provided basic demographic information for comparisons in the analysis.

6.2.2. Data Collection, Management, and Security

Each focus group was facilitated by the doctoral researcher and was audio-recorded, with the permission of participants. Refreshments, including water and light snacks, were provided for each group. A discussion guide for each focus group was developed (see Appendix H for sample discussion guide) and used to facilitate the dialogues. As the intent of the focus group was to generate discussion, the discussion guide was supplemented or revised slightly, as needed, during the discussion. The revisions made to the questions remained in keeping with the intent and topic range of the original guide.
A general welcome and introduction to the discussion process were offered by the doctoral researcher; and ground rules for the discussion, as well as prepared definitions of key terms, were provided verbally and in print (see Appendix I). Recognizing that there is no single definition of aesthetic experience, the term was defined for the purpose of the discussion in relation to the arts as “…experiences that feel distinctly different from other experiences. They may include highly focused attention or awareness fully focused on the present moment; they could include a sense of overwhelming beauty, strong emotion or identification with a character, image or idea. But, usually, they have a lingering effect. They stay with you in some way.” (White, 2015; Nanay, 2018).

Self-efficacy was defined as the belief that one can carry out a behaviour necessary to reach a desired goal, even when a situation involves unpredictable and stressful elements (Bandura, 1977; Bandura, 2006). And, that it can be thought of as confidence in one’s ability to successfully perform specific tasks or behaviours. Understanding of these concepts was confirmed by the participants.

Participants sat in a circular formation and engaged in dialogue for 40-90 minutes. At the start of the group, participants were invited to introduce themselves with their first name and were given an opportunity to ask any questions about their participation before the start of the discussion. Participants were also reminded that they were welcome to take a break from or discontinue their participation in the discussion at any time.

The doctoral researcher asked each question on the discussion guide and encouraged dialogue among all members of the group. Each discussion guide included six questions and probes that were used as needed during the dialogues. Audio recordings of the focus groups
were transcribed either by the doctoral researcher or members of the doctoral researcher’s Interdisciplinary Research Lab members.

As noted above, each focus group was audio-recorded and transcribed. All records, including the audio recordings, transcriptions and Excel Spreadsheets and other documents used for analysis, were stored in the secure password-protected University of Florida Yammer and Dropbox systems. Audio recordings were destroyed after the transcriptions were validated, transcriptions were completed, and one round of coding had been undertaken directly from the recording. This approach was used to compare the coding of the written transcriptions, and to garner the advantage of hearing the stories told with their full emotional content and emphasis. While names were included in the original transcripts, transcripts were cleaned to remove identifiers and no identifying information was included in the Excel spreadsheets used for analysis. All data were stored in secure, password-protected, University of Florida Dropbox files.

**6.2.3. Data Analysis**

Thematic analysis was conducted using a grounded theory coding approach (Charmaz, 2014), along with context-mechanism-outcome coding (Pawson & Tilley, 1997). As a part of the overarching mixed methods grounded theory study, a constant comparison approach was also used to compare themes across groups.

Two separate approaches to coding – grounded theory coding for themes and context-mechanism-outcomes coding - were used in the analysis. Within those approaches, several stages of coding were undertaken. The grounded theory coding process included line-by-line coding, thematic coding and the development of thematic categories (Charmaz, 2014). All coding was undertaken manually by the doctoral researcher. Coding was also undertaken by members of the UF Center for Arts in Medicine Interdisciplinary Research Lab and used to challenge, triangulate
and confirm the doctoral researcher’s analyses. Context-mechanism-outcome coding was also undertaken by the doctoral researcher and separately by the research assistants. The research assistants’ coding was used to triangulate with the doctoral researcher’s codes, allowing the doctoral researcher to consider bias and the accuracy of the codes applied before finalizing them.

6.2.3.1. Thematic Analysis with Grounded Theory Coding for Themes

Thematic analysis was conducted using a grounded theory coding approach. In this approach, coding preserved action (by using verbs, gerunds and action-oriented codes) and was focused through the lens of the study aim to investigate and identify potential linkages between arts engagement, aesthetic experience, self-efficacy, and health-related behaviour change in arts-based health communication programs.

As noted, manual coding was undertaken by the doctoral researcher, with assistance from the Interdisciplinary Research Lab’s research assistants. The thematic analysis was conducted using both audio and written transcripts. Each focus group data set was coded individually, and each member of the group, including the doctoral researcher, conducted independent line-by-line coding of the data. The research assistants then engaged in a consensus-building process and created a set of master codes for each focus group. The group also discussed their codes with the doctoral researcher.

A codebook was developed for the thematic analysis as it was conducted, including a list of themes and their definitions and examples from the data that exemplified the themes. Themes were developed iteratively, with in-vivo codes applied when possible. The doctoral researcher used the research assistants’ codes and themes for triangulation and to challenge bias during each stage of the analysis. These stages included:
o Initial independent line-by-line coding from the audio recording of each focus group by the doctoral researcher and the research assistants

o Independent line-by-line coding from written transcripts of each focus group (at least three weeks after coding from the audio was undertaken to reduce bias from audio analysis) by the doctoral researcher and the research assistants

o Organization of codes from all data sets under emerging themes by the doctoral researcher and – separately - by small groups of research assistants

o Second line-by-line coding of each raw data set (at least three months after the initial coding to reduce bias from first analysis; this version was used as the final set of codes) by the doctoral researcher and – separately - by small groups of research assistants

o Development of themes from data sets combined by group (program participants, arts professionals, public health professionals) by the doctoral researcher

o Comparison of researcher’s codes and themes with research assistants’ codes and themes

o Comparison of themes across groups by the doctoral researcher

o Refinement of themes and categories by the doctoral researcher

o Data validation

Data Validation. Four validation techniques were used to ensure the validity and trustworthiness of the thematic analysis of the focus group data:

1. Peer Debriefing (Hadi & Closs, 2016): Throughout the study, the researcher engaged in peer debriefing with two academic supervisors and two peer colleagues who are academic researchers in the field of arts in health. This analytic triangulation provided the doctoral researcher with feedback on the study methods, analysis and data interpretation.
2. Member Checking (Hadi & Closs, 2016; Creswell, 2018): Member checking was undertaken following completion of the data analysis. In this process, the themes and conclusions developed by the doctoral researcher were sent via e-mail to the participants in each focus group. The participants were invited to comment on the accuracy of the themes and conclusions from their perspectives.

3. Reporting of Disconfirming Evidence (Creswell, 2018): the doctoral researcher reported negative and disconfirming evidence, including themes that fall outside of the topic of the study.

4. Thick Description (Creswell, 2018): In all communication of findings, rich descriptions of the study population, inclusion criteria, settings, methods, and analysis are provided.

6.2.3.2. Context-Mechanism-Outcomes (CMO) Coding

A blank codebook was developed for the CMO analysis. The codebook included definitions of terms and specification of the context, mechanism and outcomes being coded. As coding of the data from all of the groups was undertaken, examples from the data of how these codes were applied were added to the codebook to illustrate and anchor the definitions (see Appendix J). Coding was conducted first using the audio recordings, and then several weeks later, using the written transcriptions. The coding records were compared to validate the coding. CMO coding was also undertaken by a team of five research assistants from the doctoral researcher’s Interdisciplinary Research Lab. Each member of the team undertook independent coding and then consensus was developed by the group. The doctoral researcher used this coding to consider other views and to reduce investigator bias. In three instances, the doctoral researcher recognized bias and changed codes as a result of the consideration of the group’s suggestions.
The group’s codes were not adopted directly in these instances, but facilitated reconsideration and clarification of the doctoral researcher’s codes.

Five CMO codes were used:

- **CMO1**: Outcome - Self-efficacy; a statement, story or assertion based on experience that includes reference to self-efficacy on the part of a program participant (Arts-based Health Communication Program (ABHCP) + AE + SE).

- **CMO2**: Outcome - Intent for behaviour change; a statement, story or assertion based on experience that includes reference to intent for behaviour change on the part of a program participant (ABHCP + AE + IBC).

- **CMO3**: Outcome - Behavior change; a statement, story or assertion based on experience that includes reference to behaviour change on the part of a program participant (ABHCP + AE + BC).

- **CMO4**: Outcome – Self-efficacy and intent for behaviour change; a statement, story or assertion based on experience that includes reference to both self-efficacy and intent for behaviour change on the part of a program participant (ABHCP + AE + SE+IBC).

- **CMO5**: Outcome – Self-efficacy and behaviour change; a statement, story or assertion based on experience that includes reference to both self-efficacy and behaviour change on the part of a program participant (ABHCP + AE + SE+BC).

**Data Validation.** Three validation techniques were used to ensure the validity and trustworthiness of the CMO analysis (Creswell, 2018; Hadi & Closs, 2016):

1. Peer Debriefing: The same process, as described in section 6.2.2.6.1 above was applied to the CMO coding process.
2. Investigator Triangulation – Investigator triangulation was used to leverage a range of perspectives in the doctoral researcher’s coding of the CMO data. The doctoral researcher and research assistants from different disciplinary backgrounds each coded the data independently, then engaged in individual (doctoral researcher/research assistant dyads) and full group dialogue. This approach was employed to compensate for potential lone-investigator deficits and enhance inference quality.

3. Thick Description: In all communication of findings, rich descriptions of the study population, inclusion criteria, settings, methods, and analysis are provided.

6.2.3.3. Data Integration

Recognizing that the thematic (qualitative) and CMO (quantitative + qualitative) analyses could not be combined, the doctoral researcher used three methods for data integration – diffraction, back-and-forth integration, and data transformation (Fetters, 2020; Fetters et al., 2013). The thematic analysis created a qualitative description of the understandings of focus group participants (with constant comparison undertaken between the three groups), and the CMO analysis created a quantitative view of how each group connected aesthetic experience, self-efficacy and behaviour change. This connection mitigated the risk of unintentional bias toward the doctoral researcher’s initial hunch that the three concepts are or could be instrumentally connected in arts-based health communication programs. The CMO analysis also generated qualitative data that identified mechanisms of aesthetic experience and associated those mechanisms with specific art forms in a cross-comparison, and provided insight into what (such as artforms) worked for particular groups in particular contexts.

Diffraction was used to create a view of the different layers of the data, with an emphasis on recognizing and retaining their differences. Diffraction is “a practice of attending to
relationality, process, and messiness in the always-incomplete object” (Uprichard & Dawney, 2019). The process acknowledges the participation of the doctoral researcher in making meaning out of the messiness and complexity of the different data types. It recognizes the value of patterns, problems and entanglements in the data to help retain and present the complexity of a phenomenon.

Back-and-forth and data transformation approaches were used to integrate the thematic and CMO analyses (Bazeley & Kemp, 2012). The doctoral researcher iteratively looked from one data set to the other as a means for finding similarities, connections, and differences and, ultimately, for enhancing the clarity of the findings. Data transformation allowed the doctoral researcher to frame the patterns identified in the CMO analysis into qualitative, thematic findings intended to communicate the understandings of the study participants (Fetters et al., 2013).

6.3 Results

6.3.1 Responses and Participant Information

A total of 32 people participated in the groups. Twelve of these individuals were arts professionals, twelve were public health professionals and eight were program participants. The art form most commonly used by professionals was theatre (41%, n=13 used theatre), followed by literary arts (28%, n=9), and visual arts (21%, n=7). Among those in the program participant group, 50% (n=4) had experienced theatre, while 25% (n=2 each) had experienced literary arts or visual arts. A broad array of art forms was represented (see Table 6.1 below), including some that were not searched for specifically in the study’s literature review, such as gardening and culinary arts. These art forms did, however, fit with the study’s broad framing of the arts and aesthetic experiences. Additionally, they were chosen and facilitated specifically as art forms by the program professionals. Demographics such as age and gender were not considered relevant to

135
the research questions and were not collected. All of the participants worked or participated in programs in urban areas.

The professionals who participated represented a broad array of programs and practices, including an HIV/Aids support organization that facilitates a gardening program - using gardening explicitly as an art form - to reduce stigma and build social cohesion between trans sex workers and the general community, a program that uses Theatre of the Oppressed with communities facing discrimination and oppression, a dance company that facilitates dance programmes for women dealing with domestic violence, a program that uses theatre and puppetry with people with diabetes, a program that uses storybooks to teach sexual and reproductive health to youth, a program that uses theatre for suicide prevention in schools, a program that uses mixed arts with incarcerated youth, and a mass-media television program focused on comprehensive sexual health, race and gender issues among urban Latino youth (see Table 6.1).

Table 6.1

Descriptors of Programs Represented by Focus Group Participants

<table>
<thead>
<tr>
<th>Group Type</th>
<th>#Partic.</th>
<th>Art Forms</th>
<th>Target Population(s)</th>
<th>Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts Professionals (New York)</td>
<td>6</td>
<td>Gardening Theater Puppetry Dance Storytelling</td>
<td>Homeless people Marginalized communities Trans sex workers People with diabetes Victims of domestic violence People with HIV Children College students</td>
<td>Suicide Structural oppression Disability Homelessness Poverty Reproductive health Chronic illness</td>
</tr>
<tr>
<td>Arts Professionals (Los Angeles)</td>
<td>6</td>
<td>Theatre Creative writing Dance Visual arts Poetry</td>
<td>Jewish adolescents Incarcerated youth At-risk youth Pregnant teens and teen mothers</td>
<td>Incarceration Identity issues Comprehensive sexual health</td>
</tr>
</tbody>
</table>
6.3.2 Thematic Analysis of Single Groups

The analysis produced sets of categories and themes for each of the three population groups included in the study, as well as for the groups as a whole. In keeping with grounded theory coding and analysis, the themes were framed as statements that express the understandings of the study participants. The study participants were placed into three groups – public health professionals, arts professionals, and program participants.

6.3.2.1 Public Health Professionals

Seven primary themes emerged from the public health professional groups:
Public health professionals understand and carefully craft aesthetic experience.

Aesthetics (aesthetic appeal, beauty and artistry) are critical to engagement and identification.

Personal and cultural relevance are critical.

Program participants have aesthetic experiences.

Active arts participation can build confidence, new skills and self-efficacy.

Narratives are instrumental in facilitating behaviour change in health communication programs.

Participants change behaviours as a result of aesthetic experiences.

Overall, the public health professionals group expressed a strong understanding of aesthetic experience as a mechanism for engagement, empathy, and identification with concepts. They recognized and actively utilized aesthetic experience as a strengths-based approach in their programs, and also recognized that, due to the multi-modal nature of work, arts programs can provide practical resources for participants to support sustained behaviour change.

Program participants have aesthetic experiences. The groups recognized that their program participants have aesthetic experiences. They recognize that aesthetic experience has powerful and lasting effects and that it can be intentionally crafted and utilized as a mechanism in programs with behaviour change goals. One public health professional shared, “Absolutely there's an aesthetic experience, I think very purposely built into every program… we’ve even heard students talk about that.”

Public health professionals understand and carefully craft aesthetic experience. The groups expressed an understanding of aesthetic experience as a concept and as a functional mechanism in health communication programs. They all intentionally craft aesthetic experience.
as a way to engage target populations with health issues and to facilitate connection, reflection, discovery and dialogue. Some facilitate the arts themselves and some hire or work on teams with professional artists. They also expressed a high level of importance for artistry and spectacle in engaging people in ways that are personally and culturally relevant. They use aesthetic mechanisms to engage people emotionally and to create identification with narratives and characters. They also use aesthetic experience as a mechanism for facilitating embodied and sensory experiences to facilitate deeper understanding and consideration of health concepts. A public health professional stated, “It’s beautifully shot on purpose. We put a lot of money, a lot of rehearsal behind it.” Another public health professional explained:

Like, season one, our main actress was not a dancer, and so they had to use a double. So, for future seasons, we auditioned dancers like you would audition for a music video or a top-stars dance team. We auditioned hundreds of people... And we picked the best of the best dancers, because again, our audience can see it. It all contributes to that aesthetic experience and to the authenticity of the show.

One public health professional mentioned, “The ones who are drawn into it are the ones who begin to articulate their experiences a little bit more clearly.”

**Aesthetics (aesthetic appeal, beauty and artistry) are critical to engagement and identification.** Participants described understandings of how aesthetic mechanisms facilitate engagement and identification with issues and concepts. Beauty, spectacle, and artistry, as well as culturally relevant aesthetic elements (such as characters who look like participants and do things – like dancing – that participants relate or aspire to), were commonly cited as particularly useful and important dimensions of programs that effectively draw participants into programming. Several study participants use drama as a primary art form. A public health
professional noted, “All of us as humans are drawn to spectacle, are drawn to beautiful things.” Similarly, a public health professional said, “For people to imagine, it has to be beautiful, it has to be powerful, it has to be something that really comes at them like, wow, I have to pay attention to this.” Another public health professional offered:

It has to be fun to watch, but also even if it’s hard and dark, it has to be beautiful.

Right? Because if you’re just shooting… it’s such a competitive media landscape. You’re competing with other things that are lighter and more fun and more glitzy. You’re in an aesthetic competition. If you want to deliver all these other messages, you need to be on the same level of fun and sexiness… But the aesthetic expression is as important as the social impact expressions, as the writing, audiovisual, etc…

Aesthetic experience is as important as the writing.

**Personal and cultural relevance is critical.** Public health professionals expressed not only understanding of, but a high priority for, creating and facilitating programming that provides personal and cultural relevance for participants or target audiences. This element was regarded as equally important in every art form, including the performing, visual, literary and culinary arts. Participants expressed an understanding of how personal and cultural relevance not only engage people more effectively but also lead to higher levels of emotional engagement, empathy and consideration of personal experiences, values and choices. A public health professional stated:

And one of the kids was like sobbing… saying that I never saw myself in television – this is the first time I saw myself, my neighbourhood, my home, my mother, my grandmother, the colour of my skin. And that [for] me was very powerful because,
for us, it’s the ultimate goal because if you do that everything else is easier, because it is about identity and if you want behaviour change and if you want public health impact – it’s about identity and about that connection with the person’s identity.

Another public health professional shared:

But when they are looking at other people’s images - some of them were like a young hand with a hand of a grandparent or an elder person - so then when viewers are looking at those, they can kind of put their own identities onto the things that are in the images and that can transcend them into thought that they would not have normally have had without looking at those images.

**Active arts participation can build confidence, new skills and self-efficacy.** Focus group participants described how participation in arts-based programs – particularly participatory programs – provided empowerment, enhanced confidence, and provided participants with new skills, practice in using those new skills and, in turn, enhanced their belief that they could put those new skills to use in relation to their health and wellbeing. The opportunity for program participants to “rehearsal for life” was noted as a useful mechanism in the development of confidence and self-efficacy. For example, one public health professional said, “They don't think they can, and then they do, and then they're amazed.” Another public health professional noted, “The creative process… lends itself to a strength-based space for folks to step into, where it's easier for them to live in this space where they really kind of believe in themselves and their confidence.” One public health professional stated:

One of the things that they say over and over is out in the world, if they don't know how to do it perfectly, they just don't do it. Having a place to play with the things that they are
not sure of, if they don't yet know how to do it but want to talk through, try, or practice with each other. Those behaviours, it gives them confidence to then go out and do it.

**Narratives are instrumental in facilitating behaviour change in health communication programs.** Narrative art forms and specific narratives developed within dramatic arts programs were described as useful in providing program participants with scenarios that they could consider in relation to their own lives. Focus group participants described intentional use of narratives and dramatic hooks in facilitating personal reflection and dialogue. They also recognized mass media, such as television and social media platforms, as effective health communication mechanisms. A public health professional commented, “We’ve had people reach out to us for help – the show gave me courage to speak up about their own abuse. Because of seeing Camila’s storyline- as a direct result of the show she reached out for resources for help.”

Another public health professional noted:

> We hear so much from our fans… which storylines really resonated with them and which characters and we have to attribute it to the dramatic portrayals of these characters and stories. Because, again, reading it in the newspaper or seeing it on the news is different than seeing someone who looks like them who talks like them who dresses like them. All of which is very purposeful in the producing side. You know, we hear so many times that they are relating to this character. And, seeing the emotions that they go through, if its anger because of the immigration thing or sadness because of a boyfriend or something. We hear it from our fans that they are really relating to the drama.
The concept of resonance, noted in the quote above, is discussed at length in Chapter 4, section 4.3.2.1, as well as in Chapter 8, section 8.5.

**Participants change behaviours as a result of aesthetic experiences.** Focus group participants cited numerous examples of program participants changing their behaviours and linked those changes directly to the aesthetic experiences. Behaviour changes were both observed and reported by participants to the facilitators. Some programs also documented behaviour changes through evaluation and research. One public health professional said, “We have actual research to show that people have taken action for themselves and their communities as a result of the show.” In reference to a participatory arts-based health communication program, another public health professional explained:

I had a moment with my teen girls where this girl walked in… ‘Well, I'm making out with a boy last night and he asked for my consent, and this is how this went down [sounds of assent and delight among focus group participants]…’ Right? And all the girls were all excited, but it was all the stuff that we had been like playing with, practising, and exploring.

Overall, public health professionals articulated that engagement, connection, spectacle, artistry, emotion, reflection, discovery, dialogue, beauty are unique qualities or capabilities of the arts and aesthetic experiences that make them useful in health communications programs. They also recognized, as reflected in their comments, that aesthetic experience contributes to behaviour change by facilitating personal and cultural identification, opportunities for reflection and choice, rehearsal for life, and the development of new skills, confidence, empowerment, and self-efficacy that the arts and aesthetic experiences provide.

**6.3.2.2 Arts Professionals**
Five primary themes emerged from the arts professionals groups. These themes, again, are framed as understandings:

- Aesthetic experience creates an "endowed" space that can facilitate self-transcendence and behaviour change
- Arts-based learning is different than other learning
- The arts facilitate choice and build confidence, which can support behaviour change
- The arts facilitate dialogue, which is instrumental in decision-making
- Artists recognize that the arts provide rehearsal for life, which is instrumental in facilitating behaviour change

The arts professionals expressed a high level of understanding and utilization of aesthetic experience as a mechanism for engagement, learning, transformation and behaviour change. Some members of this group spoke more to the concept of empowerment than self-efficacy. This orientation may reflect the nature of the work of some of their organizations as focused on social change in relation to health, and is discussed further in Chapter 7, section 7.5.1. Arts and aesthetic experience were sometimes used synonymously in the dialogue, as group members were deeply invested in facilitating aesthetic experience in their work. They spoke consistently of intentionally crafting aesthetic experience, specifically, within their arts programming.

Aesthetic experience can create an "endowed" space that facilitates embodiment of concepts and self-transcendence. An arts professional noted, "There is an energetic shift that you can just sense when it's happening. When people drop in, they tune in differently and it feels very palpable to me." One arts professional shared, "It was just fascinating to watch [program participant] go from feeling really consumed by this experience and story to then feeling
empowered by it, or by her strength, and understand it more.” And, another arts professional said, “It's the aesthetic experience and then what comes after that is so transformative…” Yet another arts professional offered, “It in fact is the aesthetic experience that makes [attitude and behaviour change] happen. It's the most vital part.”

**Arts-based learning is different than other learning.** The arts professionals shared an understanding that the arts can provide a different form of learning – one in which participants can make their own discoveries and have their own insights, as opposed to having information imparted to them. They agreed that arts-based learning has advantages over more didactic learning modalities. An arts professional stated:

…the things that we do with sexual health or comprehensive sexual health… don't work because we're sharing information or wearing white coats and handing out pamphlets like public health folks would do. They work because they're very involved and participatory. They work because they touch us on different levels… if we start our project work thinking about engagement and the sharing of ideas that we also allow for a different kind of freedom on the part of the participants and the recipients of our projects. We're encouraging them to do their own processing, we're encouraging them to think their own thoughts.

Another arts professional explained:

But I guess for an example, with the work I did with suicide. The framework of the workshops, were never about suicide. It was all done through myth and metaphor. And it was up to the students and the participants to bring the issues to the surface. Whereas if I brought in suicide and life or death contemplation and all of that, it would be much less successful.
The arts facilitate choice and build confidence, which can support behaviour change. The arts professionals shared the view that choice is a key component of achieving behaviour change, and that the arts provide a space in which people can make and practice new choices. They recognized that choice-making is inherent in arts practices, and having the opportunity to make choices can build confidence among participants in regard to their ability to both make and implement choices. Acting on or acting out those choices within an artistic frame, such as theatre, can increase confidence in one’s ability to act out those choices in life. A public health professional stated:

There is power through art because there is officially no right or wrong; and you sort of celebrate the choices that you make. You know, in a larger context, your choices are completely shut down. Other people's choices are exerted upon you - and people's scales of validation - but when you are in this artistic context and it’s more of sort of an open plane for your choices and then you find a good choice that works, you know. Then validating that choice by doing it back it’s like, ‘oh my gosh’.

Another arts professional noted:

It's [dance program for victims of domestic violence] about making individual choices in the context of the community, because domestic violence is often about isolation and power and control, so making choices is a large part of [the program] and creating something together through a series of choices… [Participant] has found that it is so significant to her personal evolution as a woman and to her life that she's really prioritizing this in the face of many other competing time drains.
An arts professional shared, “But that's the experience with many of them, just the pride that they feel while doing it, the feeling that they're making beautiful things and that they're able to make them.”

The **arts facilitate dialogue, which is instrumental in decision-making.** The importance of dialogue was a significant theme in the group. The arts professionals all described how they use the arts to facilitate dialogue or craft dialogue into their arts practices. They noted the importance of dialogue in relation to understanding, decision-making, and individual and collective behaviour change. An arts professional said, “The two-way dialogue is what, is how it transforms the person. And what they do with it afterward.” One arts professional stated:

When they watch the scene, when the fifteen-year-olds watch the nineteen-year-olds doing the scene, they are drawn in, they are affected by the mechanisms of identification, they're pulled into the story, just a very short story, usually, a little sketch of the scene. So much so that they begin to have a kind of a series of ruminations going on in their heads, almost like the wheels are turning to use that kind of cliché of what it is for thinking to go on. So, the wheels are turning and they're imagining what they could do or how they could do differently or how could they convince the boyfriend to wear the condom or how could they talk to the mother differently so that it's a respectful conversation about making sexual health decisions. I mean, whatever it is, whatever the scenario is calling for and I think that that's the linkage moment in forum theatre, that's the linkage between having an aesthetic experience, being drawn in in particular ways that enliven and set off the turning of the wheels and then weave through the assertion itself, what can I do? What can I say? What can I do to change the endpoint here?
The arts provide rehearsal for life, which can be instrumental in facilitating behaviour change. The focus group participants shared consensus that theatre and other art forms can provide program participants with opportunities to “rehearse for life”. They talked about how they use art forms - most often theatre – to give people opportunities to practice skills, behaviours, and other ways of asserting themselves in relation to choices or discoveries they make within the programs. An arts professional said, “We always say that theatre's a rehearsal for life.” Another arts professional shared, “Well, our whole thing is saying what you want and saying what you need, and practising it through theatre. But that to me, this is really huge. It's huge. It's huge.” And, one arts professional noted, “So, it's all about... rehearsing for life... it's improv, using improv and the experience of doing improv to practice [new skills].” An arts professional explained:

She was incarcerated [and] did our program. She's a very shy young woman. [and] comes from a low- income family and there's a big problem with a stepsister... the mother passed away, the father's trying to get custody. And what has been amazing in this past year, that this individual has been the advocate for the family in court. And she herself has said that if she did not do our program, she would have never been able to be that voice cause being in court is like being in a theatre which is true. [She is] able to articulate what they want and what they need, [which] was what we did in our program... I really feel that this was a crucial moment in her life that the tools that we gave her enabled her to be able to advocate for herself, for her family.

An arts professional said, “But standing on stage and performing, there is nothing in this universe that is as empowering. Period. I said enough.” Collectively, these themes represent a shared understanding of a process for using the arts, and aesthetic experience
specifically, to engage participants deeply in topics and issues that are relevant to them, and to support their exploration of ideas, and to facilitate personal insights, confidence and rehearsal of new behaviours and implementation of behaviour changes.

Overall, arts professionals recognize that engagement, connection, voice, embodiment, emotion, reflection, discovery, and dialogue are unique qualities or capabilities of the arts and aesthetic experiences that make them useful in health communications programs. They also recognize that aesthetic experience contributes to behaviour change by facilitating reflection, choice, rehearsal for life, confidence, new skills, self-transcendence.

6.3.2.3 Program Participants

Two focus groups engaged adults who had recently participated in arts-based health communication programs. All of the participants in the groups had participated in drama programs, some with live drama and some with televised drama. Some had also participated in visual arts programs, but the conversations focused largely on the drama programs.

The two groups produced vibrant around their shared experiences. Members of both groups expressed gratitude for the programs they participated in. They also talked about how the programs helped others, and about their desire to use the knowledge and new behaviours, they achieved to help others. They shared agreement that their experience with the arts program enhanced their empathy for others and that learning through the arts is different than learning through other modalities, like reading about issues in the newspaper or being taught about them in school. Six themes emerged from the dialogues:

- Artistry and realism heighten engagement
- Personal and cultural relevance can heighten engagement and identification
- Aesthetic experience can have lasting effects
- Dramas can normalize issues and facilitate deeper consideration of self
- Participants gain the confidence to use resources and change behaviours
- Participants can gain empathy and become eager to help others with new knowledge

**Artistry and realism heighten engagement.** Program participants articulated the importance of both artistry and realism in engaging them in narratives and concepts. Realistic scenarios that are presented in beautiful, dramatic and compelling ways facilitated focus, identification, empathy and better understanding for the participants. They also described how artistry and realism helped them to be more “being in the moment”.

A program participant shared, “I was able to empathize with a lot of the scenes and characters throughout the show – everything was so real – they were everyday experiences that I was drawn into – I could finish the show in one day.” Another program participant noted, “The respect and understanding, that’s what drew me in. How they treated the people who are going through it, the situation, how they portrayed it in a beautiful and respectful manner.” And, one program participant said, “I was drawn into how it looked and the choreography.”

Another program participant mentioned, “They used aesthetics for the drama of the show, which amplified what [the characters] were going through. The stylized dance routines, seeing when they were dancing, they look powerful and empowered.” A program participant noted:

I think that the artistic presentation of the information or the interactions made it really different than like I said, just reading it on paper, it really made you focus, it made you really identify and feel more empathy with each of the different characters.
Personal and cultural relevance can heighten engagement and identification. The relatability of the programs was a key factor for the program participants. They all agreed that seeing characters who looked like them, lived in communities like theirs and experienced things they experienced was critical to their engagement and identification with concepts and issues. For example, one program participant said, “I’m from south-east LA and the aesthetic of it, it made me happy to see my neighbourhood represented in a way that I hadn’t seen up until that point.” Another program participant indicated:

This was the first time seeing an entire cast that looked like me, who were brown, and filled with people who kind of had some of the same stories, relating to characters or new people because they went through the exact same thing because they grew up in a place close by. I’m from south-central. The biggest thing for me was watching a show that was super relatable. A lot of experiences that they went through, I either knew someone or someone in my family went through things like that.

A program participant also shared, “I think it represents my experiences as a high schooler, I felt like I was four different people in that experience.”

Aesthetic experience can have lasting effects. The participants recognized that the changes in perspective, knowledge and behaviours that they experienced lasted over time, even to the present and they believed that the effects would remain with them over time. They described a sense of identity in relation to the new choices and behaviours they had adopted, along with a feeling of pride in accomplishing them. A program participant indicated:
It’s not like a couple months after I change my mind. I think the show helped me be aware that I should be thinking a certain way and I thought that way ever since. It was such a big change that nothing’s going to make me go back.

Another program participant said, “I think that it changes lives and it changes interactions because it changes perspectives, and that carries into the future… it’s actually mind-blowing.”

**Dramas can normalize issues and facilitate deeper consideration of self.** Drama, in particular, was noted as a powerful means of normalizing issues that felt stigmatized and facilitating self-reflection. The participants saw that things they were experiencing were more “normal” than they had previously thought. They also related to storylines and characters in ways that stimulated consideration of their own lives and choices. A program participant mentioned:

It normalized a lot of things for me – my mom is super old school so we never talked about sex – so I learned everything I knew about sex through tv and movies – ELH [East Los High] was the first show that took it seriously – not just as a plot device – but took scenarios I knew my friends go through and took it seriously – not going to dance around the fact that these things happened – made me feel less alone, these things are normal – don’t feel villainized or what you do is abnormal, the show helped to have me see it’s a normal thing.

A program participant questioned, “How do I be as strong as these characters were... these kids did it, so how do I do it now.”

**Participants can gain the confidence to use resources and change behaviours.**

Through arts engagement and narratives, participants discovered new resources as well as the
confidence and intention to utilize them. They also described how they were able to effect new behaviours because of their engagement in the programs. A program participant shared, “It definitely gave me more confidence, I wouldn’t have talked to my parents otherwise. It changed the way I approach the subject… made me think of how to approach it when the time comes.” Another program participant commented:

It made me aware of all the resources that are available to me that I never took seriously – or I never had anyone tell me they were at my disposal – I knew they were there but I didn’t know they were for me.

Also, a program participant noted, “The show helped me realize not to be afraid to ask for help if I need it. I can use resources that I have and talk to somebody or go to the doctor when I need to.” A program participant explained:

I think that what it did is it really made me think about my health care providers and are they listening or what are the things that I really want to get across… I think it helped empower better communication, even though I don't feel I had really poor communication, but I think it really gave me more confidence and empowered me a bit more in how I interact with the health care providers.

Participants can gain empathy and become eager to help others with new knowledge. A major theme in the dialogues was how much participants empathized with the characters in the dramas, and how that led them to empathize more with others in their lives and to want to help others with the knowledge and skills they had gained. This theme was particularly strong among those who had engaged over time in the televised drama. They felt confidence and pride in their behavioural choices and wanted to share their discoveries with others so their lives and health could be improved as well. A program participant shared:
I felt really empathetic with Eddie and the whole DACA situation when he was detained – that was really powerful, these are real-life situations that you don’t see on television portrayed – it was great that they showed that this is happening.

A program participant noted, “After watching I feel like I could be a mentor.”

Another program participant said, “But seeing this show and putting East LA on the map, I want to do the same thing for my community and tackle similar issues.” One program participant shared, “It gave me the tools to feel I can do something, so whatever way I can contribute even if its small or may seem small, I can continue to do that.” Similarly, a program participant said, “It made me want to go out and help others...

Overall, program participants articulated that engagement, presence, personal and cultural relevance, identification, empathy, insight are unique qualities or capabilities of the arts and aesthetic experiences that make them useful in health communications programs. They also recognize that aesthetic experience contributes to behaviour change by facilitating understanding, insight, confidence, better communication, utilization of resources, adoption of new behaviours, and confidence to help others.

6.3.3 All-group Analysis

Five primary categories were developed from the full data set: engagement, narrative, personal and cultural relevance, confidence, and self-transcendence. These categories encompass the emergent themes from each group as sub-categories and reflect the theoretical frames - Social Cognitive Theory and the Transtheoretical Model - upon which the study was designed.

Figure 6.1
Categories and Sub-categories

Note. Empathy is shown in blue-green above because it is a sub-category of both narrative and personal and cultural relevance.

Engagement. All of the groups expressed a clear understanding of the concept of aesthetic experience. They conveyed understanding that aesthetic experience facilitates deeper engagement, enhanced presence, heightened emotional engagement, embodiment of concepts, and empathy (for self and others). They also recognized consistently that arts practices and aesthetic experience are highly effective at facilitating dialogue. They also described aesthetic experience as a special, or endowed, space. All three groups talked about how arts-based learning is “different” than other learning, and that it has advantages, particularly related to engagement.
**Narrative.** Collectively, the focus group participants expressed a recognition of the value of narrative in engaging people with health topics and consideration of personal choices. They also recognized the power of narrative to engage people emotionally, cultivate empathy, and facilitate self-reflection in relation to health behaviours. Most of the discussion of narrative was in the context of drama-based programs, where empathy with characters and scenarios allowed participants to consider their own lives and choices. Empathy is represented in blue-green in Figure 6.1 above, as it is a sub-theme of both narrative and personal and cultural relevance.

**Personal and cultural relevance.** All of the groups recognized that personal and cultural relevance, or identification, is key to self-reflection and facilitation of behaviour change. Participants related to characters and narratives that were realistic and had similarities to their lives and communities. Program participants used the term “relevance”, while program facilitators more often used the term “identification”. Public health professionals were more concerned with personal and cultural relevance than arts professionals. For program participants, personal and cultural relevance was extremely significant. They were highly cognizant of the importance of personal and cultural relevance in their engagement in the programs and the concepts presented.

**Empowerment.** The professionals and program participants alike recognized that aesthetic experience, including active engagement in creative activities as well as audience participation in live or television drama, provides opportunities for building new skills, confidence and empowerment. This empowerment comes through discovering and practising new skills and choices, and through opportunities to rehearse those new choices in art-making or through dramatic structures. The notions of confidence, empowerment and self-efficacy emerged from the discussion of engagement with various art forms, while the notion of “rehearsing for
life” as a form of translating choices into new skills, intentions and behaviours was discussed primarily in relation to the dramatic arts.

**Self-transcendence.** All of the groups discussed experiencing shifts in conceptual boundaries and personal transformations in themselves (the participants) or their program participants (the professionals). These transformations included the embodiment of new ideas, insights, changes in perspectives of issues or their own experiences, and new choices they made about their lives and behaviours. The term *self-transcendence* best encompasses what the group members described – that program participants experience enhanced understanding and personal insight that changes their worldview and actions. Program participants emphasized the permanent nature of these changes.

### 6.3.4. Cross Comparisons

Cross comparison was undertaken throughout the analysis, with comparisons made between the groups of public health professionals, arts professionals and program participants. Several themes were consistent across all three groups, while others varied. Most of the similarities occurred between the two professional groups, but all three groups reflected a consistent recognition that aesthetic experience occurs in the arts-based health communication programs discussed, and that engagement is heightened within aesthetic experiences.

The professional groups shared understanding that aesthetic experience also facilitates connection, reflection, discovery and dialogue, and all intentionally craft aesthetic experience to facilitate these mechanisms. Public health professionals expressed understanding that artistry and spectacle heighten engagement among program participants, while arts professionals talked about how aesthetic experience facilitates embodiment of concepts and gives voice to participants. Program participants focused strongly on personal and cultural relevance, a concept
also noted by the professionals, as well as on identification, empathy and the experience of insight that they attributed to aesthetic experience.

**Table 6.2**

*Comparison, Aesthetic Experience*

<table>
<thead>
<tr>
<th>What is it about Aesthetic Experience?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Health Professionals</td>
</tr>
<tr>
<td>o Engagement</td>
</tr>
<tr>
<td>o Connection</td>
</tr>
<tr>
<td>o Emotion</td>
</tr>
<tr>
<td>o Reflection</td>
</tr>
<tr>
<td>o Discovery</td>
</tr>
<tr>
<td>o Dialogue</td>
</tr>
<tr>
<td>o Spectacle</td>
</tr>
<tr>
<td>o Artistry</td>
</tr>
</tbody>
</table>

**Table 6.3**

*Comparison, Behaviour Change*

<table>
<thead>
<tr>
<th>How does aesthetic experience relate to behaviour change?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Health Professionals</td>
</tr>
<tr>
<td>o Personal and cultural identification</td>
</tr>
<tr>
<td>o Reflection</td>
</tr>
<tr>
<td>o Choice</td>
</tr>
<tr>
<td>o Rehearsal for life</td>
</tr>
<tr>
<td>o Confidence</td>
</tr>
<tr>
<td>o New skills</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
6.3.5 Context-Mechanism-Outcomes Analysis

The content-mechanism-outcomes (CMO) analysis identified and coded instances in the data that linked arts-based health communication programs (the context) with aesthetic experience (the mechanism) and one or more of the defined outcomes - self-efficacy, intent for behaviour change, or behaviour change. The following codes were used:

- **CMO1**: Outcome - Self-efficacy; a statement, story or assertion based on experience that includes reference to self-efficacy on the part of a program participant (ABHCP + AE + SE).

- **CMO2**: Outcome - Intent for behaviour change; a statement, story or assertion based on experience that includes reference to intent for behaviour change on the part of a program participant (ABHCP + AE + IBC).

- **CMO3**: Outcome - Behavior change; a statement, story or assertion based on experience that includes reference to behaviour change on the part of a program participant (ABHCP + AE + BC).

- **CMO4**: Outcome – Self-efficacy and intent for behaviour change; a statement, story or assertion based on experience that includes reference to both self-efficacy and intent for behaviour change on the part of a program participant (ABHCP + AE + SE+IBC).

- **CMO5**: Outcome – Self-efficacy and behaviour change; a statement, story or assertion based on experience that includes reference to both self-efficacy and behaviour change on the part of a program participant (ABHCP + AE + SE+BC).

This analysis used a directed approach to coding, with these five pre-identified context-mechanism-outcomes configurations. In these configurations, the outcomes varied while the context and mechanism remained constant. Participant responses were part of conversations that
were focussed only on arts-based health communication programs, and participants were asked about outcomes that result from engagement in aesthetic experiences. In the following sections, the results of the CMO analysis are communicated in relation to the five different outcome configurations (Jackson & Kolla, 2012). Example quotes are provided, with references to the aesthetic experience or its specific mechanisms (M) (when specifically noted) underlined, and with the outcomes (O) in italics. The context (C) for all instances is the arts-based health communication program, which is the subject of all discussion and therefore not included in each quote. In some instances, a mechanism, such as confidence, may also be an outcome (as an indicator or component of self-efficacy), and is underlined and italicized.

The CMO analysis coded a total of 59 instances in the data that linked arts-based health communication programs (C) with aesthetic experience (M) and one or more of the defined outcomes (O) - self-efficacy, intent for behaviour change, or behaviour change, or a combination of these outcomes, as noted above.

**Figure 6.2**

*CMO Codes for All Groups*
The analysis also found that 80% (n=44) of the coded instances were cited in relation to forms of theatre, including live participatory theatre or drama programs (n=7), theatre or dramas performed live (n=12) or on television (n=22), puppetry (n=1), or storytelling (n=2). Instances were also cited in relation to gardening, visual arts and mixed arts programs. The largest number of CMO codes were found in quotes from program participants (n=23), followed closely by public health professionals (n=21). Arts professionals made fewer links between context, mechanism and outcomes (n=16). However, there were three focus groups conducted with public health professionals, while there were only two conducted with arts professionals and two with program participants.

Figure 6.3

Art Forms Linked to CMO Codes
6.3.5.1. CMO1: Self-efficacy

The most common coding occurrence was CMO1, with the outcome of self-efficacy noted. In these 24 instances, focus group participants communicated a statement, story or assertion, based on their experience, that included a reference to self-efficacy on the part of a program participant or in their crafting of the program as a facilitator. These outcomes were all noted as being related to aesthetic experience in an arts-based health communication program. The focus group participants frequently talked about how they (participants themselves) or their program participants experienced empowerment as a result of their participation in the aesthetic experience.

A public health professional said, “It was just fascinating to watch her go from feeling really consumed by this experience and story to then feeling empowered by it.” Another public health professional shared, “And I think these types of workshops can really be helpful for that in giving them confidence that they can cook for themselves and live in that healthy lifestyle.” Focus group participants also noted that “rehearsing for life” through
the arts builds confidence in one’s ability to change health behaviours. A public health professional stated:

One of the things that they say over and over is out in the world, if they don't know how to do it perfectly… they don't do it. Having a place to play with the things that they are not sure, if they [don’t] yet know how to do but want to talk through, try, or practice with each other. Those behaviours, it gives them confidence to then go out and do it.

An arts professional commented, “And they don't think they can and then they do and then they're amazed.” Shifts in confidence and even self-identity among program participants were also noted, including the development of a stronger voice through the programs. One public health professional noted:

[They] incorporate [the stories they create about themselves] into how they talk about themselves and tell a story of who they are and how they're portraying themselves. I definitely see that by the time that they leave, you see that they're talking, that they see themselves as more confident and powerful, and able to use their voices in different ways than they did when they came in.

Participants noted increased confidence in their ability to utilize available resources. A program participant said, “The show helped me realize not to be afraid to ask for help if I need it. I can use resources that I have and talk to somebody or go to the doctor when I need to.” In addition, program participants, in particular, talked about how they developed the confidence and desire to help others through their new knowledge, and some spoke about having the confidence to make social or policy change as well. And, one program participant
indicated, “After watching [the show], I feel like I could be a mentor.” Another program participant explained:

[It gave me confidence about] how I go out there and help now, how do I be as strong as these characters were- to protest, or writing a letter to the mayor, after watching the show. These kids did it, so how do I do it now.

One program participant said, “Makes you feel a lot more empowered that my voice matters, I'm capable of making a change in the world.”

6.3.5.2. CMO2: Intent for Behaviour Change

There were six instances of CMO2, with the outcome of intent for behaviour change. The focus group participants talked about how they had identified and were planning new behaviours, including intentions to be tested for HIV and the intention to help others with their new knowledge and skills. An arts professional stated:

[A program] we call the Sex Squad Program... It's the one where the college students are performing for the fifteen-year-olds. There's a part where an HIV positive person tells their personal story and then the fourth part is integrative art making... And so, when we asked about their intent to be tested for HIV, we went up by, I'm going to say a number but I can't remember it exactly now, but it was by four times.

A program participant shared, “[The program] made me want to go out and help others and bring awareness to other people about what is happening.” People also talked about how aesthetic experience helps program participants engage in thinking about and planning in regard to their health behaviours. An arts professional stated:

When the fifteen-year-olds watch the nineteen-year-olds doing the scene, they are drawn in, they are affected by the mechanisms of identification, they're pulled into
the story, just a very short story, usually, a little sketch of the scene. So much so that they begin to have a kind of a series of ruminations going on in their heads, almost like the wheels are turning - to use that kind of cliché of what it is for thinking to go on. So, the wheels are turning and *they’re imagining what they could do or how they could do differently, or how could they convince the boyfriend to wear the condom, or how could they talk to the mother differently so that it’s a respectful conversation about making sexual health decisions*. I mean, whatever it is, whatever the scenario is calling for and I think that that's the linkage moment in forum theatre, that's the linkage between *having an aesthetic experience, being drawn in in particular ways that enliven and set off the turning of the wheels* and *then weave through the assertion itself - what can I do? What can I say? What can I do to change the endpoint here?*

6.3.5.3. CMO3: Behaviour Change

There were 22 instances of CMO3, with the outcome of behaviour change. People talked about how, as a result of their participation in the arts-based health communication programs, new health-related behaviours had been adopted. Some of these behaviours related to social determinants of health, such as gardening, voting and social cohesion. For example, a gardening program resulted in previously polarized community members beginning to work together, resulting in improved social cohesion and decreased isolation. A public health professional commented:

We received a message from a fan on Facebook – she said *she was standing in line right now to vote because of the show*. Even though that is a single story, that really
hit us in terms of the impact the show can have. That it encouraged even that one person to vote, that was a big success to us.

An arts professional shared, “And then you would see someone from the neighbourhood starting to work together with someone that they really were vehemently opposed to, like to even be around, to be within ten feet of.” Some people described how they, or their program participants, had begun actively advocating for themselves, their family or community members around issues such as abuse and sexual health. A public health professional noted:

We have actual research to show that people have taken action for themselves and their communities as a result of the show. We’ve had people reach out to us for help – the show gave me courage to speak up about their own abuse. Because of seeing Camila’s storyline- as a direct result of the show she reached out for resources for help.

An arts professional explained:

And honestly, we didn't recognize that for a long time, we weren't paying any attention to the students, the college students and then high school students who were forming their own Sex Squads and when we finally started to do that, it's like, "Oh, that's where the big impacts were," because that was sustained activity over many weeks or months. And it was a different level of drinking in ideas and information, processing with your friends, becoming the expert for your mini-community outside, your brothers and your sisters and your friends.

Another arts professional said, “I have had people who have suffered real complications from diabetes begin to advocate for themselves in the health system in a
different way.” Many people talked about behaviour changes that related to personal health behaviours, such as general self-care, chronic disease management, and cooking and eating better. A program participant shared, “I do take time for self-care now.” A public health professional noted, I have had a student leave and come back the next time and say, ‘Hey, last time we made this, and over the past week when I was home, I did this’.

6.3.5.4 CMO4: Self-efficacy + Intent for Behaviour Change

There was just one instance of CMO4, with the outcomes of self-efficacy and intent for behaviour change. This person noted their intention to talk more openly about sexual and reproductive health issues. A program participant commented:

[The show] changed the way I approach the subject... before the show, I would have been like my mom and ignored it, but now seeing how it’s affected me – it’s made me rethink how I want to approach talking about it, regardless of how awkward.

6.3.5.5 CMO5: Self-efficacy + Behaviour Change

There were six instances of CMO5, which included linked descriptions of both self-efficacy and behaviour change. One program participant described how watching the television drama, East Los High, created a change in communication behaviours. A program participant stated, “[The show] definitely gave me more confidence, I wouldn’t have talked to my parents otherwise.” Other participants talked about behaviour change related to sexual consent. Public health professional shared:

I had a moment with my teen girls where a girl walked in, ‘Well, I'm making out with a boy last night and he asked for my consent and this is how this went down...’ Right? And all the girls were all excited, but it was all the stuff that we had been, like, playing with, practising, and exploring.
People also described instances of behaviour change related to active self-advocacy or advocating for family members or others. An arts professional stated:

And what has been amazing in this past year, that *this individual has been the advocate for the family in court*. And she herself has said that if she did not do our program, she would have never been able to be that voice cause being in court is like being in the theatre, which is true. *[She was] able to articulate what they want and what they need,* [which] was what we did in our program... I really feel that this was a crucial moment in her life that the tools that we gave her enabled her to be able to advocate for herself, for her family.

Arts and public health professionals also related their operational understanding of the relationship between aesthetic experience, self-efficacy and behaviour change. A public health professional commented:

So, it's just indicated to me something about how *if we present through aesthetic experience, images, narratives, storylines of scenarios that are of direct applicability to the person who's watching that they're going to watch, they're going to watch really closely and they're going to get those wheels turning and then it will result in shifts in them which can lead to real behaviour change.*

Overall, a range of different outcomes was noted, as shown in Table 6.4, below.

**Table 6.4**

*Context Mechanism Outcome Configurations*

<table>
<thead>
<tr>
<th>Context</th>
<th>Mechanism</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts-based Health Communication Programs</td>
<td>Aesthetic</td>
<td>Asserting health needs or desires</td>
</tr>
<tr>
<td></td>
<td>Experience</td>
<td>Recognizing abilities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Confidence to cook and eat better</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Confidence to change behaviours</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Speaking more stronger and clearly</td>
</tr>
<tr>
<td>Theatre</td>
<td>Engagement</td>
<td>Self-efficacy (CMO1)</td>
</tr>
<tr>
<td>---------</td>
<td>------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>Gardening</td>
<td>Empowerment</td>
<td>Confidence and desire to educate and help others</td>
</tr>
<tr>
<td>Puppetry</td>
<td>Confidence</td>
<td>Confidence to use health resources</td>
</tr>
<tr>
<td>Dance</td>
<td>Identification</td>
<td>Confidence to make social or policy change</td>
</tr>
<tr>
<td>Storytelling</td>
<td>Insight</td>
<td></td>
</tr>
<tr>
<td>Creative Writing</td>
<td>Empathy</td>
<td></td>
</tr>
<tr>
<td>Culinary Arts</td>
<td>Beauty</td>
<td></td>
</tr>
<tr>
<td>Poetry</td>
<td>Rehearsal for life</td>
<td></td>
</tr>
<tr>
<td>Visual Arts</td>
<td>Mastery</td>
<td></td>
</tr>
<tr>
<td>Music</td>
<td>Accomplishment</td>
<td></td>
</tr>
<tr>
<td>TV Drama</td>
<td>Transcendence</td>
<td></td>
</tr>
<tr>
<td>Comic Books</td>
<td>Safety</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Support</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Risk-taking</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Enjoyment</td>
<td></td>
</tr>
</tbody>
</table>

6.3.5.6. *Cross Comparisons Across Participants Groups*

Cross comparisons were made across the three focus group participants groups (arts professionals, public health professionals and program participants), as well as across the different art forms engaged in the health communication programs. The latter comparison looked specifically at the mechanisms of aesthetic experience that were noted across the four most
commonly referenced art forms – theatre, visual arts, gardening and mixed arts programs. Because theatre was applied in distinctly different ways, the theatre category was further broken down into three more specific categories – participatory theatre, live theatre performance, and television drama. As a result, this comparison was made across six category groups, as detailed below.

**Comparisons Across Groups.** In the cross-group comparison, each of the three groups communicated instances in which context, mechanism and outcomes were linked between 16 and 23 times, with program participants making the most links (n=23). Public health professionals most commonly noted the outcome of self-efficacy (CMO1, n=12), while arts professionals noted behaviour change most frequently (CMO3, n=7). Program participants most commonly and in equal measure noted self-efficacy (CMO1, n=9) and behaviour change (CMO3, n=9). Program participants were the only group to note self-efficacy + intent for behaviour change (n=1).

**Figure 6.4**

*Group Comparisons*
Comparison across Art Forms. In the comparison across art forms, the specific mechanisms involved in aesthetic experience were examined to explore potential differences and distinctions between various art forms utilized in the health communication programs. Examples (not all instances) from the most commonly used art forms are provided in Table 6.5 below.

Table 6.5

Comparison of Mechanisms of Aesthetic Experience in Primary Art Forms

<table>
<thead>
<tr>
<th>Art Form</th>
<th>Mechanisms of Aesthetic Experience</th>
<th>Outcome(s)</th>
<th>Quote</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theatre: participatory</td>
<td>Engagement, beauty, narrative, insight, accomplish-ment</td>
<td>Self-efficacy &amp;behaviour change (CMO5): Forgiveness</td>
<td>“This woman who had an experience with her husband and had been unable to forgive him for many, many years... And listening to her own words... she said she had not been able to stop thinking about it....in listening to her story read back to her, she realized that she had written something beautiful. And she forgave him... there was a huge health outcome for her, in that many years later, she was finally able to let this go.” (Arts Professional)</td>
</tr>
<tr>
<td>Rehearsal for life, mastery</td>
<td>Behaviour change (CMO3):</td>
<td></td>
<td>She was incarcerated [and] did our program. She's a very shy young woman… And what has been amazing in this past year, that this individual has been the advocate for the family in court. And she herself has</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Theatre: TV Drama</th>
<th>Identification, empathy, confidence</th>
<th>Self-efficacy (CMO1): Confidence to take action</th>
<th>“[It gave me confidence around] how I go out there and help now, how do I be as strong as these characters were- to protest, or writing a letter to the mayor, after watching the show. These kids did it, so how do I do it now.” (Program Participant)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theatre: Live performance</td>
<td>Identification, insight</td>
<td>Self-efficacy &amp; behaviour change (CMO5): Confidence to communicate</td>
<td>“[The show] definitely gave me more confidence, I wouldn’t have talked to my parents otherwise.” (Program Participant)</td>
</tr>
<tr>
<td>Engagement, identification, insight</td>
<td>Intent for Behaviour change (CMO2): Planning better health behaviours</td>
<td>“When the 15-year-olds watch the 19-year-olds doing the scene, they are drawn in, they are affected by the mechanism of identification, they're pulled into the story… So much so that they begin to have a kind of a series of ruminations going on in their heads, almost like the wheels are turning to use that kind of cliché of what it is for thinking to go on… they're imagining what they could do or how they could do differently or how could they convince the boyfriend to wear the condom or how could they talk to the mother differently so that it's a respectful conversation about making sexual health decisions… I think that that's the linkage… between having an aesthetic experience, being drawn in in particular ways that enliven and set off the turning of the wheels and then weave through the assertion itself - What can I do? What can I say? What can I do to change the endpoint here?” (Arts Professional)</td>
<td></td>
</tr>
<tr>
<td>Theatre: Live performance</td>
<td>Identification, insight</td>
<td>Self-efficacy (CMO1): Confidence to take action</td>
<td>“But this really amazing thing that happened was that one of the people who was in the room was the head of one of the major State Department of Human Services. He was a Governor’s political appointee. At the end of the workshop, stood up and said that he hadn't understood the problem in the way that he now understood it... the experience of being in the room, seeing the [theatre piece], hearing the dialogue that was occurring among various audience members afterward. He made that connection on his own, like ‘I can do something about this thing.’” (PH Professional)</td>
</tr>
</tbody>
</table>
Gardening

<table>
<thead>
<tr>
<th>Beauty</th>
<th>Behaviour change (CMO3): New healthy behaviour, social engagement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>“...and then you would see someone from the neighbourhood starting to work together with someone that they really were vehemently opposed to, like to even be around, to be within ten feet of... Literally everyone started to participate in this because they saw this as a way of beautifying the neighbourhood then they realized who was doing it, then they said this is okay.” (Arts Professional)</td>
</tr>
</tbody>
</table>

Visual Arts

<table>
<thead>
<tr>
<th>Confidence, self-transcendence</th>
<th>Self-efficacy (CMO1): empowerment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>“…working with a kid who had some trauma that they were working through and one of the modalities I am getting trained in is trauma-focused cognitive behavioural therapy. So, it's using the narrative of the trauma, like talking about it so that it loses its strength for the kid and using art as a way to visually represent areas of the trauma as well. And seeing this client work through their distress and be able to manage the experience and anxiety decrease. We name their anxiety, &quot;sparky&quot;. As like-- [laughter]. She named it… the end, she almost forgot Sparky's name. She's like, &quot;What did I call it again?&quot;. It was just fascinating to watch her go from feeling really consumed by this experience and story to then feeling empowered by it, or by her strength, and understand it more. So that was the example that kept coming up when I am thinking about self-efficacy piece. (PH Professional)</td>
</tr>
</tbody>
</table>

Mixed Arts

<table>
<thead>
<tr>
<th>Beauty, accomplishment, mastery</th>
<th>Self-efficacy (CMO1): pride, confidence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>“But that's the experience with many of them, just the pride that they feel while doing it, the feeling that they're making beautiful things and that they're able to make them.” (Arts Professional)</td>
</tr>
</tbody>
</table>

In this comparison, all of the instances included recognition of engagement as a mechanism of aesthetic experience. Empowerment, cultivation of confidence, identification with characters or scenarios, insight, empathy, beauty, mastery and rehearsal for life were also frequently noted.

Table 6.6

Frequently-noted Mechanisms of Aesthetic Experience
More mechanisms were noted in relation to forms of theatre and mixed arts programs (which included theatre) than to gardening, dance, culinary arts, or visual arts. When the three forms of theatre were grouped into a single theatre category, theatre could be seen to be a form of aesthetic experience that utilizes a multifaceted array of mechanisms.

Table 6.7

*Frequently-noted Mechanisms of Aesthetic Experience, Theatre Groups Combined*
The overarching themes of connection (including safety, support, identification, empathy), rehearsal for life (including identification, risk-taking, mastery), and empowerment (including confidence, mastery, accomplishment) emerged from this analysis in relation to theatre. No significant clear patterns that associated specific mechanisms with specific art forms were discernable. However, this secondary analysis of the CMO coded data provides confirmation and deeper insight into what it is about aesthetic experiences that can be associated with self-efficacy, intent for behaviour change, and behaviour change.

6.3.6. Data Validation

Four data validation methods were applied to the study: peer debriefing, member checking, reporting of disconfirming evidence, and thick description. Thick description is offered within the results section of this chapter, and the findings of the other three data validation processes are provided below.

6.3.6.1. Peer debriefing

<table>
<thead>
<tr>
<th>Insight</th>
<th>Empathy</th>
<th>Beauty</th>
<th>Rehearsal for life</th>
<th>Mastery</th>
<th>Accomplishment</th>
<th>Transcendence</th>
<th>Safety</th>
<th>Support</th>
<th>Risk-taking</th>
<th>Choice</th>
<th>Connection</th>
<th>Enjoyment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>
While peer debriefing was undertaken throughout the study, a final more formal phase was undertaken to validate the doctoral researcher’s analysis. In this phase, two academic supervisors conducted coding of three de-identified sample transcripts (three of the seven focus groups). Strong agreement in the coding was found, and only minor adjustments were made to the final analysis as a result.

6.3.6.2. Member checking

Member checking was undertaken following completion of the data analysis. In this process, each group of participants (public health professionals, arts professionals and program participants) received via e-mail a report of the themes and conclusions developed by the doctoral researcher. The report included an overview of the study and its aims, a report of the themes derived from the focus group each individual participated in as well as a summary of the analysis of each group and an additional report of the analysis of all groups. The participants were invited to comment on the accuracy of the themes and conclusions from their perspectives.

Ten (31%) of the 32 focus group participants provided feedback. Six of these individuals were public health professionals, three were arts professionals, and one was a program participant. All agreed that the themes were accurate. Seven provided comments that emphasized the accuracy, relevance, and/or importance of the findings from their perspective, and one offered further clarification of how aesthetic experience is oriented and used in her work.

6.3.6.3. Reporting of disconfirming evidence

No disconfirming evidence was found. While a range of perspectives was represented, none of the evidence stood in opposition to the themes and findings. The feedback noted above in the member checking process provided some clarification, but did not disconfirm the findings.

6.3.6.4. Thick description
In all communication of the study findings, rich and detailed descriptions are provided, including quotes from the raw data, and descriptions of the study population, inclusion criteria, settings, methods, and analysis.

6.4. Conclusion

The two analyses of the focus group data - the thematic analysis and the CMO analysis - individually and together suggest that both public health and arts professionals operationalize their tacit knowledge of the relationships between aesthetic experience, self-efficacy and behaviour change in the arts-based health communication programs they facilitate. This understanding is supported by the quotes from program participants that confirm the connection between engagement in arts-based health communication programs and the outcomes of self-efficacy, intent for behaviour change, and behaviour change. Further, these data identify several mechanisms of aesthetic experience that may be associated with these outcomes (See Table 6.7 above).

As presented in Table 6.8 below, these analyses produced both qualitative themes and quantitative constructs, which were brought forward into the data integration phase of the overarching study presented in Chapter 7.

Table 6.8

Qualitative Themes and Quantitative Constructs

Qualitative Themes

- Program professionals intentionally craft aesthetic experience to facilitate health behaviour change
- Aesthetic appeal, beauty and artistry are critical to engagement and identification
- Personal and cultural relevance can heighten engagement, identification, understanding and insight
- Narratives engage people
- Aesthetic experiences can be memorable and have lasting effects
- Arts-based learning is different than other learning
• Arts participation can build confidence, new skills and self-efficacy
• The arts can facilitate embodiment, dialogue and insight
• The arts can provide "rehearsal for life", which can enable behaviour change

Quantitative Constructs (Context-Mechanisms-Outcomes (CMO) Analysis):
• CMO1 (self-efficacy) = 24 instances
• CMO2 (intent for behaviour change) = 6 instances
• CMO3 (behaviour change) = 22 instances
• CMO4 (self-efficacy + intent for behaviour change) = 1 instance
• CMO5 (self-efficacy + behaviour change) = 6 instances
• 80% of codes related to theatre
• 100% art forms used for engagement
• 85% art forms used for mastery
• 50% art forms used to build confidence

Together, the analyses identify not only categories that describe the experiences and understandings of those involved with arts-based health communication programs, but they also illuminate the perceived connections between the constructs. The thematic analysis served to identify the codes, themes and categories involved in these programs and people’s experiences with them, while the CMO analysis and its cross-comparisons served to illuminate linkages made by study participants between the constructs. Key findings of this study include:

○ Numerous dimensions of engagement, narrative, personal and cultural relevance, empowerment and self-transcendence are recognized and utilized by public health and arts professionals who facilitate arts-based health communication programs and by program participants

○ Public health and arts professionals who facilitate arts-based health communication programs and people who participate in those programs believe that:
  ○ Arts-based learning is different than other learning
  ○ Aesthetic experience can deepen engagement
o Narratives can facilitate empathy, self-reflection, understanding and choice
o Personal and cultural relevance can deepen engagement, identification and insight
o Arts engagement can build knowledge, skills, confidence, and self-efficacy
o The arts can provide rehearsal for life, which builds self-efficacy
o Aesthetic experience can facilitate insight and self-transcendence, and enables behaviour change

These analyses illuminate themes that provide insight into how and why aesthetic experience may be a useful mechanism in health communication programs. They also suggest that people who design and facilitate arts-based health communication programs use aesthetic experience, and some of the more specific mechanisms within it, to positively influence or facilitate self-efficacy and behaviour change. This influential relationship can be seen both in the tacit knowledges that public health and arts professionals operationalize in their programs and in the experiences of program participants who describe these outcomes as resulting directly from their aesthetic experiences within these programs.

This study’s findings, along with those of the studies presented in Chapter 4 and Chapter 5, were used in the data integration phase of the overarching explanatory sequential study, which is presented next, in Chapter 7.
Chapter Seven: Results and Discussion

7.1 Introduction

In keeping with the grounded theory approach, the study began with two planned stages of data collection, which were followed iteratively by additional stages of data collection and analysis. In keeping with the mixed methods approach, each data set was analyzed independently as they were collected, and findings were integrated in a final analytical stage. This chapter will present the final data integration and its interpretation, as well as its meta-inference (Tashakkori & Teddlie, 2008) in the form of a conceptual model that – based on the tacit knowledge of people who design, facilitate, and participate in arts-based health communication programs - suggests linkages between aesthetic experience and behaviour change in the context of arts-based health communication programs.

7.2 Brief Summary of Methods Used for Data Integration

As described in Chapter Three, the data integration process utilized spiraling and back-and-forth approaches to data integration, as well as diffraction. Within the spiraling and back-and-forth processes, the doctoral researcher continuously introjected one data set’s analysis into the others by cyclically considering:

- the qualitative themes from the theoretical literature review;
- the descriptive statistics and constructs derived from the survey;
- the qualitative themes derived from the focus groups; and
- quantitative context-mechanism-outcomes instances identified in the focus group data.

The findings of each individual study are summarized in the conclusion sections of chapters 4, 5, and 6. These integration approaches allowed the doctoral researcher to continuously
descend down to a set of common themes, meta-inferences, and linkages that formed the grounded theory and shaped the conceptual model.

7.3 Data Integration

In the data integration phase of the study, the findings of each study were merged in the three ways described above to link, explain, corroborate, contrast, and enhance each study’s findings and to develop meta-inferences. Several joint displays were used to organize the findings of each study in the data integration process, to identify linkages across the qualitative and quantitative data sets, and to develop the grounded theory (Fetters, 2020). Figure 7.1 below illustrates where the joint displays were used in the study design, and the sections below describe each of the data integration processes undertaken (linking, explaining, corroborating, diffracting, and enhancing), and their findings.

Figure 7.1

*Joint Display in the Study Design*
7.3.1 Linking

The primary joint display used in the data integration process of this study identified 60 linkages among the 40 collective themes and constructs that represented each of the qualitative and quantitative findings from each of the three studies. The joint display in Table 7.1 shows these linkages. Similar and duplicate themes were used in the linking process as a step toward distilling the final set of unique themes.

Table 7.1

*Joint Display – Linkages*
<table>
<thead>
<tr>
<th>Qualitative Sources</th>
<th>Qualitative Themes</th>
<th>Quantitative Constructs</th>
<th>Quantitative Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical literature review</td>
<td>People will attempt things they believe they can accomplish</td>
<td>Narrative art forms (theatre and film) are the most highly utilized art form in ABHCPs</td>
<td>Survey responses (closed-ended)</td>
</tr>
<tr>
<td>Focus groups (thematic analysis)</td>
<td>Mastery experience builds self-efficacy</td>
<td>Emotional engagement is the most common reason the arts are used in HCPs</td>
<td>Focus groups (CMO analyses)</td>
</tr>
<tr>
<td></td>
<td>Vicarious experience builds self-efficacy</td>
<td>The arts are used in HCPs to facilitate awareness and modeling of issues or concepts by 84% of PH professionals</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social persuasion builds self-efficacy</td>
<td>The arts are used in HCPs to facilitate dialogue</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Positive somatic and emotional states enhance self-efficacy</td>
<td>The arts are used in HCPs to reach and facilitate participation of target populations</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Learning occurs in a social context</td>
<td>The arts are used in HCPs to facilitate self-efficacy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Self-efficacy is the primary determinant for behaviour change</td>
<td>Art is instrumental</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aesthetic experiences engage attention and interest</td>
<td>Art engages people emotionally</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Embodiment influences thoughts, feelings and behaviour</td>
<td>Applied theatre theory most commonly guides ABHCPs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The alignment of an idea with one's worldview shapes cognitive processes</td>
<td>Art models and allows rehearsal of behaviours</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Resonance can activate insight, problem solving and action</td>
<td>57% of all professionals distinguish art from entertainment in their ABHCPs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Emotional arousal heightens resonance</td>
<td>84% of public health professionals use the arts to attract attention and generate excitement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Self-transcendence expands conceptual boundaries</td>
<td>98% of surveyed professionals observe relationships between the arts, self-efficacy, madness for behaviour change, and behaviour change in their ABHCPs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aesthetic experiences are memorable and have lingering effects</td>
<td>CMOI (self-efficacy) = 24</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Program professionals intentionally and aesthetic experience to facilitate behaviour change</td>
<td>CMOI (inten for behaviour change) = 6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Program participants have aesthetic experiences</td>
<td>CMOI (behaviour change) = 22</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aesthetic appeal, beauty and artistry are critical to engagement and identification</td>
<td>CMOI (self-efficacy + intention for behaviour change) = 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Personal and cultural relevance, heighten engagement, identification, understanding, and insight</td>
<td>CMOI (self-efficacy + behaviour change) = 6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Narratives engage people</td>
<td>66% of codes related to theatre</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AIE is memorable and has lasting effects</td>
<td>160% art forms used for engagement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Art-based learning is different than other learning</td>
<td>85% art forms used for mastery</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AIE builds confidence, new skills and self-efficacy</td>
<td>56% art forms used to build confidence</td>
<td></td>
</tr>
</tbody>
</table>
Note. The orange lines represent corroborating linkages

The 60 linkages between the 40 themes and constructs suggest a high level of congruency in the concepts that emerged from each of the separate studies and allowed for the themes and constructs to be distilled into a set of nine final themes, which are presented in Table 7.2 below.

7.3.2 Corroborating

Corroboration was used to identify concordance, or instances where the data – across the data sets – confirm each other (Fetters, 2020). Table 7.2 below shows the corroborations of findings across the quantitative and qualitative data sets. Of the 40 constructs and themes, 19 were corroborated across the data sets. These corroborations also contributed to the final distillation of themes.

Table 7.2

Joint Display – Corroborating
<table>
<thead>
<tr>
<th>Qualitative Sources</th>
<th>Qualitative Themes</th>
<th>Quantitative Constructs</th>
<th>Quantitative Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical literature review</td>
<td>People will attempt things they believe they can accomplish</td>
<td>Narrative art forms (theatre and film) are the most highly utilized art form in ABHCPs</td>
<td>Survey responses (closed-ended)</td>
</tr>
<tr>
<td>Focus groups (thematic analysis)</td>
<td>Mastery experience builds self-efficacy</td>
<td>Emotional engagement is the most common reason the arts are used in HCPs</td>
<td>Focus groups (CMO analyses)</td>
</tr>
<tr>
<td></td>
<td>Vicarious experience builds self-efficacy</td>
<td>The arts are used in HCPs to facilitate awareness and modeling of issues or concepts by 84% of PH professionals</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social persuasion builds self-efficacy</td>
<td>The arts are used in HCPs to facilitate dialogue</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Positive social and emotional states enhance self-efficacy</td>
<td>The arts are used in HCPs to reach and facilitate participation of target populations</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Learning occurs in a social context</td>
<td>The arts are used in HCPs to facilitate self-efficacy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Self-efficacy is the primary determinant for behaviour change</td>
<td>Art is instrumental</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aesthetic experiences engage attention and interest</td>
<td>Art engages people emotionally</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Embodiment influences thoughts, feelings and behaviours</td>
<td>Applied theatre theory most commonly guides ABHCPs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The alignment of an idea with one's worldview shapes cognitive processes</td>
<td>Art models and allows rehearsal of behaviours</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Resonance can activate insight, problem solving and action</td>
<td>57% of all professionals distinguish art from entertainment in their ABHCPs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Emotional arousal heightens resonance</td>
<td>84% of public health professionals use the arts to attract attention and generate excitement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Self-transcendence expands conceptual boundaries</td>
<td>98% of surveyed professionals observe relationships between the arts, self-efficacy, readiness for behaviour change, and behaviour change in their ABHCPs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aesthetic experiences are memorable and have lingering effects</td>
<td>CMO1 (self-efficacy) = 24</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Program professionals intentionally craft aesthetic experience to facilitate behaviour change</td>
<td>CMO2 (intent for behaviour change) = 6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Program participants have aesthetic experiences</td>
<td>CMO3 (behaviour change) = 22</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aesthetic appeal, beauty and artistry are critical to engagement and identification</td>
<td>CMO4 (self-efficacy + intent for behaviour change) = 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Personal and cultural relevance heighten engagement, identification, understanding and insight</td>
<td>CMO5 (self-efficacy + behaviour change) = 6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Narratives engage people</td>
<td>80% of codes related to theatre</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AE is memorable and has lasting effects</td>
<td>100% art forms used for engagement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Arts-based learning is different than other learning</td>
<td>85% art forms used for mastery</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AE builds confidence, new skills and self-efficacy</td>
<td>50% art forms used to build confidence</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AE facilitates embodiment</td>
<td>CMO3 (behaviour change) = 22</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AE facilitates dialogue</td>
<td>CMO4 (self-efficacy + intent for behaviour change) = 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AE facilitates insight</td>
<td>CMO5 (self-efficacy + behaviour change) = 6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AE provides 'rehearsal for life'</td>
<td>80% of codes related to theatre</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rehearsal for life enables behaviour change</td>
<td>100% art forms used for engagement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AE facilitates emotional engagement</td>
<td>85% art forms used for mastery</td>
<td></td>
</tr>
</tbody>
</table>
This stage of the analysis allowed for a final distillation of themes and constructs. Table 7.3 below shows the themes and constructs that were most linked, recurring, and corroborated in the joint displays.

Table 7.3

**Highly Linked and Corroborated Themes and Constructs**

<table>
<thead>
<tr>
<th>Qualitative Themes</th>
<th>Quantitative Constructs</th>
</tr>
</thead>
<tbody>
<tr>
<td>The arts/aesthetic experiences engage attention and interest</td>
<td>Narrative art forms (theatre and film) are the most highly utilized form in ABHCPs</td>
</tr>
<tr>
<td>AE facilitates emotional engagement</td>
<td>Art engages people emotionally</td>
</tr>
<tr>
<td>Embodiment influences thoughts, feelings, and behaviours</td>
<td>Emotional engagement is the most common reason the arts are used in HCPs</td>
</tr>
<tr>
<td>AE builds confidence, new skills, and self-efficacy</td>
<td>The arts are used in HCPs to facilitate self-efficacy</td>
</tr>
<tr>
<td>People will attempt things they believe they can accomplish</td>
<td>CMO1 (self-efficacy) = 24</td>
</tr>
<tr>
<td>Narratives engage people</td>
<td>Art is instrumental</td>
</tr>
<tr>
<td>Personal and cultural relevance heighten engagement, identification, understanding, and insight</td>
<td>98% of surveyed professionals observed relationships between the arts, self-efficacy, readiness for behaviour change, and behaviour change in their ABHCPs</td>
</tr>
<tr>
<td>AE provides &quot;rehearsal for life&quot;</td>
<td>Art models and allows rehearsal of behaviours</td>
</tr>
<tr>
<td>Aesthetic experiences are memorable and have lingering effects</td>
<td>The arts are used in HCPs to facilitate dialogue</td>
</tr>
<tr>
<td>Program professionals intentionally craft aesthetic experience to facilitate behaviour change</td>
<td>CMO3 (behaviour change) = 22</td>
</tr>
</tbody>
</table>

These themes and constructs were then de-duplicated, organized into categories, and distilled into a final set of 12 themes (Table 7.4 below). For example, the three themes, **AE facilitates emotional engagement, emotional engagement is the most common reason the arts are used in health communication programs, and art engaged people emotionally** were placed into one category and represented by the final theme, **aesthetic experience facilitates emotional**
engagement. These themes represent all three data sets in direct relationship to the objectives of the study.

One result of this process that must be noted is that, although it was one of the five primary theories included in the theoretical data set, self-transcendence was not carried forward as a final theme or construct. In the analysis, the doctoral researcher determined that - while the concept has clear relevance to aesthetic experience concerning the expansion of conceptual boundaries that can result from insight and contribute to understanding and behaviour change – self-transcendence was not clearly linked to other concepts by study participants with the same clarity that other concepts were.

Table 7.4

Final Overarching Themes

<table>
<thead>
<tr>
<th>Final Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>The arts and aesthetic experiences engage attention and interest</td>
</tr>
<tr>
<td>Aesthetic experiences are memorable and have lingering effects</td>
</tr>
<tr>
<td>Aesthetic experience facilitates emotional engagement</td>
</tr>
<tr>
<td>Narrative art forms engage people in useful ways</td>
</tr>
<tr>
<td>Embodiment influences thoughts, feelings, and behaviours</td>
</tr>
<tr>
<td>Personal and cultural relevance heighten engagement, identification, understanding, and insight</td>
</tr>
<tr>
<td>The arts facilitate dialogue and rehearsal of behaviours</td>
</tr>
<tr>
<td>Aesthetic experience builds confidence, new skills, and self-efficacy</td>
</tr>
<tr>
<td>People will attempt things they believe they can accomplish</td>
</tr>
<tr>
<td>The arts are used in health communication programs (HCPs) to facilitate self-efficacy</td>
</tr>
<tr>
<td>Program professionals observe relationships between aesthetic experience, self-efficacy, and behaviour change</td>
</tr>
<tr>
<td>Program professionals intentionally craft aesthetic experiences to facilitate behaviour change</td>
</tr>
</tbody>
</table>
7.3.3 Diffraction

The process of diffraction was used to identify discordant or divergent findings across the data sets. This process identified two instances of contradictory or disconfirming findings. Table 7.5 below specifies these instances.

**Table 7.5**

**Diffraction**

<table>
<thead>
<tr>
<th>Finding</th>
<th>Contradictory or Disconfirming Finding</th>
<th>Memo</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Survey) 72% of public health professionals and 47% of arts professionals use the arts to facilitate readiness for behaviour change</td>
<td>(Focus Groups) CMO2 (intent for behaviour change) = 6 instances</td>
<td>Those surveyed noted high utilization of the arts to facilitate readiness for behavior change, but focus group participants cited only six examples. This disconfirming suggests a need for further investigation and limits conclusions that can be made regarding readiness or intent for behaviour change.</td>
</tr>
<tr>
<td>(Survey) Live theatre is the most commonly used arts modality among both arts professionals and (73%) public health professionals (56%)</td>
<td>(Survey) N=3 survey respondents utilize theatre theory in their work</td>
<td>Given the importance of theory in guiding public health practice, the survey finding in column two either contradicts the finding in column one or suggests that the use of theatre in health communication programs is not grounded in theatre theory.</td>
</tr>
</tbody>
</table>

As a result of the diffraction process, linkages between aesthetic experience and intent for behaviour change are not made in the final meta-inferences, and the study does not assert that the use of theatre in health communication programs is grounded in theatre theory.

**7.3.4 Explaining and Enhancing**

The joint display in Tables 7.6 below shows the connections between quantitative constructs and qualitative themes and quotes, and allows the quotes to explain both the qualitative themes and the quantitative constructs. The joint display shows how the qualitative
data explain and enhance the quantitative data, leading to meta-inferences. Citations are included to support and validate these meta-inferences.

**Table 7.6**

*Joint Display for Explaining and Enhancing*

<table>
<thead>
<tr>
<th>Primary Quantitative Constructs</th>
<th>Explanatory Qualitative Themes</th>
<th>Quotes</th>
<th>Meta-inferences</th>
<th>Citations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Interest, excitement, and participation</strong>&lt;br&gt;(84.38% of public health professionals use the arts to attract attention or generate excitement)</td>
<td>1. The arts engage attention and interest&lt;br&gt;2. Aesthetic appeal, beauty, and artistry are critical to engagement and identification</td>
<td>“All of us as humans are drawn to spectacle, are drawn to beautiful things.”&lt;br&gt;“It’s beautifully shot on purpose. We put a lot of money, a lot of rehearsal behind it.”&lt;br&gt;“For people to imagine, it has to be beautiful, it has to be powerful, it has to be something that really comes at them like, wow, I have to pay attention to this.”&lt;br&gt;“We auditioned hundreds of people... And we picked the best of the best dancers, because again, our audience can see it. It all contributes to that aesthetic experience.”</td>
<td>1. The arts and aesthetic experience are compelling&lt;br&gt;2. Professionals use aesthetics and artistry to heighten engagement and aesthetic experiences</td>
<td>Dissanayake, (2003)</td>
</tr>
<tr>
<td><strong>Emotional engagement</strong>&lt;br&gt;(90.63% of public health professionals use the arts to engage people emotionally)</td>
<td>1. Aesthetic experience facilitates emotional engagement&lt;br&gt;2. Emotional arousal heightens resonance&lt;br&gt;3. Positive somatic and emotional states enhance self-efficacy</td>
<td>“You must engage the heart to have a lasting impact.”&lt;br&gt;“... people often know what they should do to become healthier. Our work helps move that information into action when they have an emotional reaction.”&lt;br&gt;“The arts appeal to one’s emotions which often override intellect when it comes to behavior.”&lt;br&gt;“We must engage the heart to engage the mind - no matter how intellectual a person or target group is - art is what will create lasting change.”</td>
<td>Emotional engagement can facilitate or be a barrier to self-efficacy and behaviour change</td>
<td>Sonke, et al. (2018)&lt;br&gt;Nabi (2017)</td>
</tr>
<tr>
<td><strong>Dialogue</strong>&lt;br&gt;(78.13% of public health professionals use the arts to facilitate dialogue)</td>
<td>Aesthetic experience facilitates dialogue</td>
<td>“... creativity in a visual message can draw in the viewer and open conversation about a health topic in a way text rarely can. Art should be a bigger part of health communication.”&lt;br&gt;“The reason we use the arts to do this work is to connect youth more deeply to the messages, to make it relevant to them and their life experiences, and to stimulate further dialogue.”&lt;br&gt;“[The show] changed the way I approach the subject... before the show, I would have been like my mom and ignored it, but now seeing how it’s affected me – it’s made me rethink how I want to approach talking about it, regardless of how awkward.”</td>
<td>Dialogue can facilitate self-efficacy and behaviour change</td>
<td>Papa &amp; Singhal (2009)</td>
</tr>
<tr>
<td><strong>Self-efficacy</strong>&lt;br&gt;(71.88% of PH professionals use the arts to facilitate self-efficacy: 24</td>
<td>1. People will attempt things they believe they can accomplish&lt;br&gt;2. Self-efficacy is the primary</td>
<td>“[The show] definitely gave me more confidence, I wouldn’t have talked to my parents otherwise.”&lt;br&gt;“An artistic experience is a catalyst that makes a change in attitude, which opens the door for a change in knowledge, that affects a belief”</td>
<td>1. The arts can mediate/facilitate self-efficacy by building skills and confidence</td>
<td>Bandura (1977)</td>
</tr>
<tr>
<td>instances of observed links between aesthetic experience and self-efficacy</td>
<td>observed relationships between the arts, self-efficacy readiness for behaviour change, and behaviour change (98% of arts and public health professionals have observed relationships between the arts, self-efficacy, readiness for behaviour change, and behaviour change in their work)</td>
<td>observed relationships between the arts, self-efficacy readiness for behaviour change, and behaviour change (98% of arts and public health professionals have observed relationships between the arts, self-efficacy, readiness for behaviour change, and behaviour change in their work)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| determinant for behaviour change | 1. Program professionals intentionally craft aesthetic experience to facilitate behaviour change | “It [art] is critical. You cannot communicate messages that you want to change behavior by using data or information, no matter how compelling it is, without connecting it to an aesthetic experience...”
“One of the things that they say over and over is out in the world, if they don’t know how to do it perfectly, they just don’t do it. Having a place to play with the things that they are not sure of, if they don’t yet know how to do it but want to talk through, try, or practice with each other. Those behaviors, it gives them confidence to then go out and do it.”
“... If we present through aesthetic experience, images, narratives, storylines of scenarios that are of direct applicability to the person who’s watching that they’re going to watch, they’re going to watch really closely and they’re going to get those wheels turning and then it will result in shifts in them which can lead to real behavior change.” |
| 3. Aesthetic experience builds self-efficacy | 2. Self-efficacy is the primary determinant for behaviour change | Public health, arts professionals, and program participants observe and experience relationships between the arts, self-efficacy, and behaviour change |

| Behaviour change (71.88% of PH professionals use the arts to facilitate readiness for behaviour change; 65.63% of PH professionals use the arts to facilitate behaviour change; 24 instances of observed links between aesthetic experience and self-efficacy) | 1. Program professionals intentionally craft aesthetic experience to facilitate behaviour change | “Our theory of change articulates that an artistic experience can help one be open to new ideas, have better retention, and inspire a change in behavior.”
“An artistic experience is a catalyst that makes a change in attitude, which opens the door for a change in knowledge, that affects a belief and provokes a change in action!” |
| --- | 2. Arts-based learning is different than other learning | Public health and arts professionals use the arts to facilitate behaviour change |
| 3. The arts are instrumental in health communication programs | 4. Aesthetic experiences are memorable and have lingering effects | Wang & Singhal (2016) |

7.3.5 Meta-inferences
From these data integration processes, meta-inferences related to the perceived linkages between the arts, aesthetic experiences, and behaviour change were derived. These meta-inferences identify correlations between the theoretical literature and the perceptions and experiences of arts and public health professionals who design and facilitate arts-based health communication programs and people who participate in those programs. They also offer a basis for the potential efficacy of such arts-based health communication programmes.

These meta-inferences suggest that in relation to arts-based health communication programs:

- the arts are compelling;
- aesthetics and artistry can facilitate or be a barrier to engagement and aesthetic experiences;
- embodiment and resonance can facilitate or (if lacking) be a barrier to aesthetic experience;
- aesthetic experiences are memorable and have lingering effects;
- emotional engagement can facilitate self-efficacy and behaviour change;
- dialogue can facilitate self-efficacy and behaviour change;
- the arts and aesthetic experience can facilitate self-efficacy by building skills and confidence;
- self-efficacy can facilitate or (if lacking) be a barrier to behaviour change;

The meta-inferences above speak directly to the study objective to identify potential linkages between aesthetic experience and health-related behaviour change, and are supported by those below:
Public health, arts professionals, and program participants observe and experience relationships between the arts, self-efficacy, and behaviour change.

Public health and arts professionals use the arts to facilitate behaviour change.

When they achieve behaviour changes, people want to help others achieve the same things.

These meta-inferences form the grounded theory, which is presented in the form of a conceptual model (see Figure 7.2 below). This conceptual model illustrates the linkages that emerged between the arts, aesthetic experience, self-efficacy, and behaviour change. It also encompasses the study’s meta-inferences, which translate as components of the arts, aesthetic experience, and self-efficacy that may serve as either facilitators or barriers in arts-based health communication programs.

7.3.6 The Grounded Theory and Conceptual Model

This explanatory sequential mixed methods grounded theory study sought to answer the research question, *can aesthetic experience contribute to self-efficacy and, in turn, to behaviour change in arts-based health communication programs?* The study emphasized investigation of aesthetic experience, and brought to bear both theoretical and empirical data, representing established knowledge, tacit knowledge, and the lived experiences of arts professionals, public health professionals, and arts-based health communication program participants.

The resulting grounded theory represents the tacit knowledge of those who design and facilitate arts-based health communication programs as well as those who participate in them, and suggests linkages between the arts, aesthetic experience, self-efficacy, and health behaviour change. The theory also suggests that various factors may facilitate or present barriers to the likelihood that one component might link to another. For example, the degree to which a person
experiences resonance with a work of art or in an art activity may influence whether, or the extent to which, they have an aesthetic experience. Or, a person’s external environment may determine, regardless of the self-efficacy they may have achieved, whether they can change their health behaviours (i.e. proximity or access to healthy foods may prevent a desired change in eating habits).

**Figure 7.2**

*Proposed Conceptual Model: Aesthetic Experience and Behaviour Change in Arts-based Health Communication Programs*

*Note:* See Appendix K for working definitions of the terms included in the model

In more detail (moving from left to right), the grounded theory suggests that the arts are compelling (they attract attention and interest), and as such can help draw people to and engage them in health communication programs, such as performances, interactive programming, or
murals. Within these arts programs or activities, the perceived or experienced artistry, embodiment, and resonance that one has with the arts may facilitate or be a barrier to aesthetic experiences. These arts-based aesthetic experiences, which can be memorable and have lingering effects, may in turn be more apt to enhance self-efficacy when they involve emotional engagement, dialogue, skills development, and when they build confidence. Conversely, a lack of these elements can be a barrier to enhanced self-efficacy.

The grounded theory also suggests that in some instances, aesthetic experiences may support behaviour change even when they don’t enhance self-efficacy. In these instances, emotional engagement or the development of new skills may lead directly to behaviour change.³

Finally, as has been well established by Bandura (1977), the grounded theory suggests that self-efficacy can support behaviour change. People will attempt new behaviours when they believe they can accomplish them. However, their ability to act on these beliefs to make behaviour changes can be impacted by facilitators and barriers such as past experiences, their physical and social environment, and their access to resources. This key finding from the theoretical data was corroborated by the expressed perceptions and experiences of participants represented in the survey and focus group data.

As represented in the conceptual model, the grounded theory suggests that the arts can facilitate aesthetic experience, which can in turn enhance self-efficacy and support behaviour change, or support behaviour change directly. The model identifies key facilitators and barriers related to these linkages. The model represents the ways in which arts and public health professionals who design and facilitate arts-based health communication programs think about

---

³ Of the 59 instances in the data that provided clear linkages between these concepts, only 6 involved readiness or intent for behaviour change. Therefore, no conclusion could be made in this study regarding relationships between aesthetic experience and intent for behaviour change.
their work (their tacit knowledge), as well as the ways in which these programs are experienced by participants. While the model does suggest linear linkages between the arts, aesthetic experiences, self-efficacy, and behaviour change, it does not suggest causal relationships. Further research is needed to investigate such causal relationships.

7.4 Conclusion

The meta-inferences derived from this explanatory sequential mixed methods grounded theory study identify and describe perceived linkages between the arts, aesthetic experience, self-efficacy, and health behaviour change in arts-based health communication programs. More specifically, they suggest that in these programs, the intentional crafting of aesthetic experiences may contribute to self-efficacy, which is a primary determinant of behaviour change.

The study suggests that both public health and arts professionals who use the arts for health communication recognize these linkages and intentionally craft aesthetic experiences to attract people to programs, engage people with health concepts and information, facilitate dialogue, support the development and rehearsal of skills, and enhance the likelihood of behaviour change. The perspectives of people who participate in these programs support these linkages.

The study does not suggest that aesthetic experience is a necessary component in these programs, as arts engagement – with or without aesthetic experience – can provide opportunities for the development of new knowledge, skills, self-efficacy, and behaviour change. Nor does this study imply causal relationships between the arts, aesthetic experience, self-efficacy, and behaviour change. More research, including empirical studies, is needed to explore associations or potential causal relationships.
This study does however suggest that, while arts-based health communication programs are not currently grounded in clear and common theoretical frameworks, both public health and arts professionals who use the arts for health communication do so using both explicit and tacit understanding of the linkages between the arts, aesthetic experience, self-efficacy and behaviour change. The conceptual model offers a framework that can help guide the use of the arts and aesthetic experience in health communication programs by identifying aesthetic experience as a mechanism that may help facilitate self-efficacy.

7.5 Discussion

This study sought to identify potential linkages between the arts, aesthetic experience, and health behaviour change, with a particular interest in identifying theoretical frames that connect these concepts, and in making visible and elevating the tacit knowledges of the public health and arts professionals who design and facilitate these programs in the United States (US). In a public health context, this tacit knowledge is often embedded in individual and organizational practice, and there is great value in the tacit understandings that prevail in practice (Connell, et al., 2003; Kothari, et al., 2012).

Three factors make this tacit knowledge particularly relevant and valuable at this time: 1) the theoretical and practical structures that inform the use of the arts for health communication are not well defined in the literature; 2) in the US - as evidenced by the prevalence of recent conferences, publications, dedicated supplemental issues in major public health journals, and educational offerings at leading US universities- interest in the use of the arts in public health (including health communication) has increased dramatically over the past two years; and 3) the current COVID-19 pandemic has made the need for effective health communication more urgent than ever.
Additionally, communities of practice related to the arts and public health are just beginning to emerge in the United States. In late 2020, the Alliance for Arts in Research Universities (a2ru) established an Arts in Public Health Community of Practice, which was launched with a mini-symposium (12 November, 2020) featuring public health and arts leaders and attended by about 150 people from across the arts and public health sectors. While there were no previously evident communities or mechanisms through which this explicit or tacit knowledge was conveyed, this community as well as the evident increase in seminars, webinars, publications, and educational offerings signals a beginning of more formal orthodoxy and knowledge sharing. Since this project began, at least seven accredited universities in the US have established courses, graduate minors, or graduate certificates in arts in public health⁴. These developments signal an increase in the collective recognition of the value of the arts in public health, and a step toward the development of shared theoretical and practical understandings and frameworks for use of the arts in public health.

In this study, the intention to explore tacit knowledge recognized that, while the use of the arts in health communication programs is fairly common, it has been “grassroots” in nature and not yet guided by a clear evidence base, practice models, standards of practice, or educational preparation. The study also examined and sought to integrate explicit, or established, knowledge through its theoretical literature review and survey. In this study, a lack of consistency in the theoretical understandings of respondents was quite notable, particularly in comparison to a similar study conducted with public health professionals and artists who work in public health programs in Uganda (Sonke et al., 2017). In that study, which presented findings from in-depth interviews with 27 arts and public health professionals, a clear common theoretical

---

⁴ These institutions are Drexel University, the University of Florida, St. Louis University, Yale University, Ohio State University, University of Minnesota, and Dartmouth University.
knowledge base was evident across both arts and public health professionals. Respondents to this study’s survey, in contrast, cited significantly more varied theoretical frames (see Chapter 5, section 5.3.2.5). Additionally, while a sharing of knowledge in relation to theoretical frames was evident in the Uganda study, this study suggests less knowledge sharing between arts and public health professionals engaged in health communication programs.

In this study, the integration of established theory, evidence, and lived experience provided a novel view of how and why the arts are used in health communication programs, and of how aesthetic experience may enhance the efficacy of these programs. It is clear that the explicit knowledge base around the use of the arts and aesthetic experience in health communication programs is yet to be built, and possible that the experiences and understandings brought forward in this study may help build this important foundation.

7.5.1. Linking the Arts, Aesthetic Experience, Self-efficacy, and Behaviour Change

While the study found that many public health and arts professionals intentionally craft aesthetic experiences as an instrumental component in health communication programs, it is important to note that this study does not suggest that aesthetic experience is necessary to the value that the arts can provide in these programs. In other words, people may experience enhanced self-efficacy as a result of participating in the arts, even if they do not have aesthetic experiences. This study suggests that numerous components of arts activities are perceived as facilitating self-efficacy, including dialogue, skills- and confidence-building, rehearsal of life skills, and deeper understanding of concepts. It does, however, suggest that aesthetic experience can be useful in heightening or enhancing the usefulness and efficacy of the arts in health communication programs.
The study found that 98% of survey respondents (66/67) and 100% of focus group participants (n=32) recognized connections between the arts, self-efficacy, readiness for behaviour change, and behaviour change in their programs. Participants described the many ways in which they operationalize these connections as they use the arts as a means for achieving their programmatic goals. These findings support previous studies of arts in health communication programs, which have suggested that the arts are an effective means of engaging people with health concepts and facilitating behaviour change (Sonke et al., 2018; Logie, et al., 2019; Kuhlmann et al., 2008; Grewe et al., 2015; UTSCHC & UOGCSCM, 2012; Muirhead et al., 2002; Sonke, et al., 2021). As noted, due to discordance in this study’s findings, implications regarding linkages between aesthetic experience and readiness for behaviour change are not suggested. Additionally, specific linkages between aesthetic experience and readiness for behaviour changes were not found in the literature.

It is also important to note that self-efficacy, as a concept, was not equally familiar across all of this study’s participant groups. While public health professionals spoke specifically about self-efficacy, some members of the arts professionals spoke more to the concept of empowerment when asked about self-efficacy. As noted in Chapter 6, this orientation may reflect the focus of the work of some of arts professionals on social change in relation to health. It also reflects that self-efficacy is more common construct in public health than in the arts. This dimension of the data also contributed to the recognition in the conceptual model that aesthetic experiences may support behaviour change even when they are not linked to self-efficacy.

Notably, many of the programs that have reported evidence of behavior change in this and other studies are theatre- or narrative-based (Mills, et al., 2013; Hinyard & Kreuter, 2007; Sonke, et al., 2017). These programs recognize and employ emotional engagement, personal and
cultural relevance, skill-building, “rehearsal for life”, and confidence-building as key elements. The findings of this study support that evidence and highlight the priority given to self-efficacy within these programs as a determinant of behaviour change. Additionally, some of the most prevalent program elements noted by the survey respondents and focus group participants correspond with Bandura’s (1977) framing of self-efficacy.

In this framing, Bandura defines self-efficacy in terms of expectations of personal efficacy, suggesting that changes in self-efficacy can be “altered most readily by experience of mastery arising from effective performance” (Bandura, 1977, pp 191). As was elaborated on in Chapter 4, Bandura defines four sources of experience that can affect self-efficacy: performance accomplishments or mastery experiences, vicarious experiences, verbal or social persuasion, and emotional arousal. These four sources are directly consistent with the elements of arts programs described by participants in this study, and are discussed in the sections below. It is important to note, first, that this study did not seek to investigate differences between active/participatory (such as interactive arts workshops) or passive/observational (such as performances), activities in arts-based health communication programs. This topic is discussed further in Chapter 8, section 8.5.

7.5.1.1. Performance Accomplishments (Mastery Experiences)

As was described by study participants, arts engagement provides people with opportunities for performance accomplishments. Within arts activities, people learn and practice new skills, make things, and experience a sense of accomplishment in doing so. Of importance is that, in these health communication programs, the arts are used to facilitate performance accomplishments directly related to health behaviours, such as talking about difficult issues, utilizing health resources, or making and eating healthy food.
7.5.1.2. Vicarious Experiences

This study also demonstrates how the arts are used in health communication programs to facilitate vicarious experiences and to model behaviours. In narrative-based programs, such as plays, television dramas, stories, or graphic novels, people engage with narratives in which they empathize with characters or storylines. In doing so, they imagine themselves experiencing what these characters are experiencing, empathize with various actions and outcomes, and consider decisions they would make or actions they would take themselves. This approach is also known as narrative persuasion, which is based on transportation theory and involves attention, emotional engagement, and the generation of mental imagery (Hamby et al., 2017). Personal and cultural relevance are particularly important in these programs, as they enhance empathy, engagement, identification, understanding, and insight.

7.5.1.3. Verbal or Social Persuasion

The arts are also a powerful format for verbal and social persuasion in health communication programs. The study brings forward the clear and collective understanding among study participants that the arts are compelling and that they are a useful means for engaging people’s interest and attention. They provide opportunities for people to engage with narratives that communicate health information. Additionally, the findings suggest that the crafting of aesthetic experiences in programs designed for verbal persuasion, like East Los High, may enhance the likelihood of behaviour change. This finding is supported by previous studies of East Los High that tested the effects of health messages in formats with varying levels of aesthetics and found that the highest levels of learning and behaviour change resulted from messages delivered through the dramatic format and supported by other multi-modal elements,
such as vlogs (video blogs by characters), comic books, and call-in radio shows (Wang & Singhal, 2016).

7.5.1.4. Emotional Arousal

The usefulness of the arts and aesthetic experience in engaging people emotionally was one of the most prevalent themes in this study and aligns with Bandura’s assertion that emotional arousal contributes to self-efficacy. Program facilitators described using aesthetic mechanisms and crafting aesthetic experiences to emotional engagement and arousal through personally and culturally relevant narratives and characters, embodied and sensory experiences, and dramatic hooks. They also linked this engagement with self-reflection and decision-making pertaining to health behaviours among program participants. Personal and cultural relevance of narratives, characters, and other elements in artworks and activities was recognized to be highly instrumental in heightening emotional engagement. While this approach has long been recognized as useful in Entertainment Education (EE) programs, this study highlights how aesthetics and aesthetic experience can be important additive elements in both arts- and EE-based health communication programs.

7.5.2. Building on Entertainment Education

While various art forms are commonly utilized within EE-based health communication programs, there is an absence of consideration in the EE literature of the roles of art and aesthetic experience in relation to the design and effectiveness of these programs. EE provides an important basis for the application of the arts to health communication, and at the same time, it falls short in recognizing the potential value of the art forms themselves and the potential of aesthetic experience to deepen engagement with programming and with health concepts, make programming more memorable, and in turn to heighten self-efficacy and behaviour change. This
study’s findings suggest that EE programs, and their outcomes, could be enhanced by explicit use of the arts and aesthetic experience.

EE programs utilize two primary structures – transportation, which refers to the cognitive and emotional engagement of participants in a narrative - and identification, which refers to cognitive and affective involvement with a story’s characters (Moyer-Gusé, 2015; Quintero Johnson et al., 2013; Slater, 2002). These structures align with Bandura’s theories of self-efficacy and behaviour change and the findings of this study, and are most often applied through various forms of dramatic arts, including radio and television drama, film, and live drama. Three of Bandura’s four principle sources of influence on self-efficacy – social modeling (or vicarious experiences), social persuasion, and physical and emotional states - can be detected as constructs in many of these programs.

Bandura asserts that “cognitive processes mediate change but that cognitive events are induced and altered most readily by experience of mastery arising from effective performance” (Bandura, 1977, p. 191). The theory of self-efficacy suggests that didactic, and even narrative, means are insufficient for optimizing the potential for behaviour change, and that active, somatic, emotional, and social engagement is necessary. This study suggests that behaviour change outcomes in EE programs may be further enhanced by the inclusion of experiential programming that facilitates performance accomplishments and mastery experiences through active, somatic, emotional, and social engagement.

7.5.3. Positioning the Results within Individual and Collection Contexts

While this study looked primarily at lived experiences of those who have facilitated and participated in arts-based health communication programs in the US, it did not intend to limit the findings or the resultant implications to individual-level health behaviour. The study recognized
that individuals exist in the context of various others and systems (Bronfenbrenner, 1992), and that individuals are not likely to change or maintain health behaviours independently of others and their environment. It also recognizes that individual self-efficacy has implications for the collective, and reflected a concept of collective efficacy. Bandura (1998) referred to collective efficacy as how an individual’s self-efficacy contributes to group directedness because “a strong sense of personal efficacy is vital for success regardless of whether it is achieved individually or by people working together” (Bandura, 1998, p. 22). Bandura framed collective efficacy as critical to the advancement of human health. This notion aligns with the current focus on a “culture of health” in the United States.

Over the past century, the field of public health in the US has moved through several distinct waves that reflect distinct perspectives on population health. The concepts of health equity, root causes, and the social determinants of health have been increasingly taken up in public health over the past several decades in what is considered public health’s fourth wave. However, even with this focus, much of public health research and practice has prioritized individual- and interpersonal-level perspectives and interventions.

Recently, many in the field have called for a fifth wave of public health, a paradigm in which the social-ecological environment generates health through a holistic and collaborative frame (Davies et al., 2014). This fifth wave view recognizes that making significant advances in population health requires collective action and social change. This study’s findings contribute to this paradigm by underscoring that: 1) the compelling qualities of the arts make them an effective means for engaging people’s interest and attention; 2) the arts, particularly when they are delivered via mass media, can reach large populations of people; 3) that aesthetic experiences are memorable, linger in people’s awareness, and facilitate dialogue within and across groups;
and 4) program participants gain empathy for others and work to help others achieve the
behaviour changes they have accomplished. These findings link individual self-efficacy to
collective efficacy and suggest that the arts and the arts sector, as a partner to the public health
sector, can make significant contributions to the culture of health in the US.

The potential implications of this model, along with the strengths and limitations of the
study, and recommendations for further research are discussed in Chapter 8.
Chapter Eight: Conclusion

8.1. Reflections on Research Aim, Objectives, and Methodology

The primary aim of this inductive mixed methods grounded theory study was to examine relationships, or potential linkages, between aesthetic experience, self-efficacy and health-related behaviour change within arts-based health communication programmes. The study addressed this aim through its two objectives:

Objective 1: To investigate and identify potential linkages between aesthetic experience and health-related behaviour change

Objective 2: To develop a conceptual model for informing the design of arts-based health communication programmes in the United States

Primary data representing the tacit knowledge, perspectives, and lived experiences of 109 individuals were collected over a 16-month period (September 2017 – December 2018) through a national survey and seven focus groups. These participants represented three different groups of people – public health professionals, arts professionals, and arts-based health communication program participants. Their insights served very effectively in addressing the research aim and objectives.

The mixed methods grounded theory approach served effectively in providing an inductive constructivist approach to data collection on this topic, which was not well represented in the literature. It allowed me to develop the grounded theory based on data garnered through an iterative process that was responsive, creative, and also grounded in a clear methodology. Neither quantitative nor qualitative data alone could have provided the breadth of perspectives that the mixed methods approach allowed. Similarly, the application of both quantitative and
qualitative analysis methods allowed for the data to be examined in ways that corroborated, explained and enhanced each set of findings. These data served in constructing a mid-range theory that integrated established theory related to aesthetic experience and health behaviour change with current lived experiences.

8.2. Contribution to Original Knowledge

This study offers several contributions to original knowledge. Most significantly, it offers a novel conceptual model that suggests relationships between aesthetic experience and behaviour change in arts-based health communication programs. These identified relationships, grounded in the theoretical literature, reported experiences, and tacit knowledges of those who facilitate and participate in arts-based health communication programs, may help guide the design and effectiveness of such programs and related research. The conceptual model offers an immediate contribution to the literature, as it is the first such model to link aesthetic experience and behavior change in the context of arts-based health communication programs, which are currently increasing in prevalence in the United States. There are currently no evidence-based models to guide these programs.

The model identifies specific facilitators and barriers in this relationship that reflect the tacit knowledge of those who design and participate in these programs, and have not previously been identified. These facilitators and barriers warrant further investigation as potential mechanisms that can be leveraged to enhance health communication programs. In the meantime, the conceptual model provides guidance for both program and research design. Most recently, the conceptual model was used by the Centers for Disease Control and Prevention (CDC) as a basis for the development and publication of two field guides designed to enable partnership between
the public health and arts sectors and the development of arts-based health communication campaigns for COVID-19 vaccine confidence and uptake in the U.S. (CDC, 2021; CDC, 2021b).

The study also contributes to knowledge through the publication of a scoping review of the literature on the arts and health communication, the first scoping review to be published on the topic (Sonke et al., 2020). Additionally, this research contributed to the development of *Arts and Culture in Public Health: an Evidence-based Framework*⁵ (Sonke & Golden, 2019; Sonke & Golden, under review). This study’s literature review, survey, and focus group data was integrated under my direction with additional literature review, survey data, and analyses of eight working group convenings of more than 250 thought leaders in the arts, public health, and community development. The findings of this broader data integration process resulted in the development of the evidence-based framework.

The framework articulates mechanisms, outcomes, and outcomes evidence related to how the arts can work in public health (including, but not limited to, health communication), offers mechanisms by which the arts can do these things, identifies 59 different health outcomes that can be impacted by arts interventions, points to specific key evidence, and offers programmatic examples (see [www.arts.ufl.edu/healthy-communities](http://www.arts.ufl.edu/healthy-communities)). This framework is intended for use by public health professionals and artists who work in public health programs, and to support cross-sector collaboration between these professionals as well as policy dialogues and initiatives related to how the arts can support health.

### 8.3. Strengths and Limitations

---

⁵ This framework was originally proposed as one of the aims and deliverables of this PhD research. Given the scale of the work proposed, this component was separated from the explanatory sequential mixed methods grounded theory study. This work was, however, accomplished through the *Creating Healthy Communities: Arts in Public Health in America* initiative (see [https://arts.ufl.edu/sites/creating-healthy-communities/home/](https://arts.ufl.edu/sites/creating-healthy-communities/home/)), which I directed between 2017-2020, with funding from ArtPlace America. The framework was developed by myself and Dr. Tasha Golden, a consultant in the University of Florida Center for Arts in Medicine.
As articulated above, a major strength of this study was its mixed methods design. Additionally, the grounded theory approach allowed for new knowledge to be constructed through iterative data collection and based on the lived experiences of a range of people with experience related to the focus of the study. The iterative process proved to be especially fruitful with the addition of the CMO analysis of the focus group data. This analysis enhanced the empirical nature of the study as it allowed for the data set to be analyzed in more than one way and also illuminated and reinforced some of the mechanisms of the arts that make them especially useful in health communication programs.

The grounded theory coding approach also allowed for the actions, choices and understandings of the participants to be preserved in the analysis. In this way, the findings were synthesized but not overly reduced to concepts or categories that might have lost the richness of the lived experiences and tacit knowledges of the study participants. Inclusion of established theory in the data set was also a strength of the study, as it provided a solid base of understanding that could be built upon and that provided corroboration with the lived experiences of the study’s participants. In addition, passion, enthusiasm, and generosity of the participants provided a very rich data set, and the focus group format allowed them to share their experiences and understandings with depth and detail.

This study was limited by the small number of people in the program participant group (those who have participated in arts-based health communication programs) included in the sample. This limitation was due to the reliance on members of the arts and public health professionals’ groups to identify program participants (see Chapter 6, section 6.2.1). A wider range of experience would have contributed significantly to a more representative sample of the experiences and understandings of program participants. This limitation was taken into
consideration in the analysis and development of the conceptual model, wherein these perspectives were appropriately weighted. Despite these limitations, the experiences of the members of this group brought important perspectives that were critical to the study. This group’s experiences supported the beliefs and experiences of the arts and public health professionals who design and facilitate programs, and also provide a useful basis for design of subsequent studies. These future studies should include ways of identifying program participants independently of program facilitators, and should include a broader range of program experiences.

The study was further limited by the small number of questions that were presented across both quantitative and qualitative study formats. In keeping with explanatory mixed methods study design, inclusion of more questions across the survey and the focus groups would have provided the opportunity for more explanatory findings around two important questions, in particular - *Do you think that the people who participate in your arts-based health communication programs have aesthetic experiences? Do you intentionally try to facilitate aesthetic experience among participants? If so, how?* Responses from the larger cohort of survey participants, particularly to the second question, may have strengthened the generalizability of this study’s findings.

The survey study was limited by its small sample size and by the snowball sampling method, which has the potential to result in a limited cross section of the full population. Within this approach, the survey is often shared from peer to peer. With a sample of only 77 people, it is likely that many of the respondents are working among similar or related programs, significantly limiting the generalizability of the results. However, this limitation is mitigated somewhat by the range of art forms used by these respondents. Further studies could be strengthened by
partnerships with professional field organizations across the arts, public health and health communication sectors.

Additionally, it is possible that the study may have been biased toward individuals with a special interest in the study or those who perceived that they have successful programmes, as those individuals may have been more likely to choose to participate in the study’s survey or focus groups. Further studies could seek out data and perspectives related to program challenges, limitations, and failures.

Finally, as is the case currently with all evidence synthesis focused on the arts and health, lack of reporting guidelines and a common taxonomy related to “the arts” and to “arts in health/public health” poses challenges to the development of reliable search strategies and therefore reliability of the findings of literature reviews. This study sought to be inclusive and to capture the broadest range of arts approaches to health communication. However, the doctoral researcher recognizes that some programs may have been missed in the literature review of existing arts in health communication programs. As was noted, the doctoral researcher and her research team offer the search strategy used in this study (see Appendix B) as a step in the refinement and advancement of strategies for subsequent evidence synthesis projects.

8.4. Implications for Health Communication Program Design and Implementation

Health communication professionals and theorists are increasingly looking to the fields of communication, marketing, and entertainment for knowledge and theory that can enhance the efficacy of health communication programs. In recent years, there has been an increase in awareness of the importance of culture in health communication, and in the arts, specifically, as a means for facilitating health communication, knowledge transfer, and behavior change (Williams, 2011; Archibald et al, 2014).
This awareness has accelerated recently - and the aims of this research became increasingly relevant - as the US has grappled with COVID-19. Even more than in many other parts of the world, both individual and collective behaviors have contributed significantly to the steep upward curve in incidence of COVID-19 in the US in 2020. Like they did during the Ebola epidemic in West Africa in 2014-15 (Sonke & Pesata, 2015), artists in the US mobilized quickly in response to COVID-19 with music, murals, dances, and dramas designed to convey critical public health information and to influence behaviour change to reduce the spread of COVID-19. Some of these initiatives took place through partnerships between public health and arts professionals. For example, DJ D-Nice, Michelle Obama, and the US Centers for Disease Control and Prevention (CDC) collaborated to produce massive online music gatherings. As they attract millions of participants, these events exemplify this study’s findings that the arts attract interest and attention. They utilize the compelling nature of the arts and the artists platforms to communicate critical and accurate health information from agencies like the CDC.

Another example is Charlie D’Amelio’s TikTok dance about staying grounded and staying home, which has been viewed over 10 billion times. Over 95,000 of those views happened in the first ten minutes. This video has led to the creation of more than 3.5 million unique #DistanceDance videos, which have collectively been viewed more than 15.6 billion times. In November of 2020, Charlie D’Amelio was named one of PR Week’s 50 Health Influencers. That is truly powerful health communication. However, with the exception of programs that engage the kind of cross-sector collaboration that is exemplified in the DJ D-nice events, many of these efforts lack accurate public health information, and they are not currently guided by clear theoretical or practical frameworks. Research is needed to determine the behavioural impacts of these programs.
The conceptual model offered by this study has the potential to help guide the design and implementation of arts-based health communication programs, including those engaged in emergency situations like the current pandemic. It also has the potential to encourage and enable cross-sector collaboration between the public health and arts sectors, and to provide a basis for additional research that can expand the evidence base and lead to more expanded frameworks for guiding arts-based health communication programs in the US.

Paired with the emergence of this fifth wave of public health over the past decade, a social and behavior change communication approach has converged communication strategies with community mobilization, advocacy, policy, and social change strategies (Obregón & Tufte, 2017). This approach emphasizes two-way dialogues that give voice and power to targeted populations, along with a recognition that individual behaviour is influenced by socio-cultural norms.

Working through the lens of the social and behavior change communication approach, Agrawal and colleagues (2014) suggest that health communication programs are most effective when they are guided by social and behavioral theory, focus on multiple levels of change (individual and social), create community engagement through participatory approaches, and use a mix of media and communication approaches, including new media technologies. The arts are ideally suited to address these guidelines, and this study’s conceptual model can offer helpful insight for applying the arts in service to social and behavior change communication programs.

In health communication programs today, there is a clear trend away from didactic, passive health education strategies, and toward more experiential, interactional, transformational, and narrative-based health communication approaches (Hinyard & Krueter, 2007). There is also a growing emphasis on communication, as a “symbolic exchange of shared meaning”, with the
acknowledgment that “communicative acts have both a transmission and a ritualistic component” (Rimal & Lapinski, 2009, p. 247). The ritualistic element recognizes individuals as members of communities and underlines the importance of active engagement within health communication programs that can enable collective understanding, shared values, and collective action.

Although they represent new paradigms in public health and health communication, these ideas are not new. They align with the long-standing understanding of the value of aesthetic experience and human behaviour. Nearly a century ago, Dewey (1934) articulated a compelling link between aesthetic experience, decision-making, and action. In his pragmatic view, he contended that aesthetic experience can facilitate expanded perception and transformation when people intuit new concepts through art, and that this transformation deepens understanding and can lead to reasoned action. He highlighted the opportunities afforded within aesthetic experiences for people to puzzle through a scenario in a problem-solving mode, which can contribute to reasoned action.

Dewey also suggested that concepts that are most familiar to people do not necessarily produce heightened consciousness with an idea, because they lack resistance. This concept is reflected in the range of characters that are used in health communication dramas, wherein characters who make the “right” decisions, “wrong” decisions, and transitional characters who are either indecisive or fluctuate between decisions are intentionally included (Moyer-Guse, 2008). These characters can provide tensions through which program participants reflect on their own values in relation to health behaviours. This notion also aligns with the concept of resonance discussed in section 4.3.2.1 (McDonnell, Bail, & Tavery, 2017), and with the concept of flow state, which suggests that in a flow state, “the individual is engaged fully in the act of doing the activity… the person loses self-consciousness and a sense of the passing of time and enters into a
different level of experience” (Csikszentmihalyi, 2003, p. 38). Achievement of a flow state is also believed to be dependent on the presence of a challenge, or the right balance between challenge and skill (Fong et al., 2015).

Sir Kenneth Robinson (2010) described aesthetic experience in terms that reflect its relationship to flow state as an experience “in which your senses are operating at their peak; when you’re present in the current moment; when you’re resonating with the excitement of this thing that you’re experiencing; when you are fully alive” (quote from a conference presentation). These well-established understandings of aesthetic experience underscore its utility as a means for increasing and deepening engagement in health communication programs that can enhance self-efficacy and, as its primary determinant, enhance possibilities for individual and collective behaviour change. Paired with the tacit knowledge and lived experiences of professionals who design and facilitate arts-based health communication programs derived through this mixed methods grounded theory study, these established understandings are reflected in this study’s resulting conceptual model.

8.5. Recommendations for Future Research

While there is a body of literature representing a fairly, or increasingly, common use of the arts in health communication programs, there are few systematic reviews and no meta-analyses. This reflects the lack of an established core outcomes set for arts in public health or health communication, and suggests a lack of consistent outcomes being measured across studies. Additionally, it reflects the lack of reporting guidelines for this area of work that could improve the quality of reporting and thus the ability for quality evidence synthesis to be undertaken. Development of a core outcomes set and reporting guidelines for arts in public health and/or health communication would assist with assessing how and to what effect the arts
are used in health communication programs. This study’s background literature review was
designed as a starting point toward understanding how the arts are being used in health
communication programs in the U.S., and as a building block toward more effective search
strategies that can enable evidence synthesis on this topic.

As use of the arts becomes more common in health communication programs, narrower
reviews of the literature (e.g., examining a specific health issue, art form, or population) and
critical reviews will be needed to support the development of a coherent field of arts in health
communication that can generate best practices, core outcomes, and resources for advancing
evidence-based practice and research for arts-based health communication programs.

This advancement, and utilization of this study’s conceptual model in it, will require
empirical studies that test the linkages offered in the model. Such studies can utilize existing
instruments that measure aesthetic experience, self-efficacy, and behaviour change, and should
test specifically these linkages, and ideally in randomized controlled trials. Additional studies
should also test the specific mechanisms of arts programs that were identified in the Context-
Mechanism-Outcomes component of this study.

By design, this study did not test the linkages found between the arts, aesthetic
experience, self-efficacy and behaviour change. As has been noted, the findings and conceptual
model represent the tacit understandings and lived experiences of the study participants. Further
studies are needed to test this conceptual model and the linkages it suggests. This study may
contribute to the design of prospective empirical studies that can test associations or causal
relationships between the arts, aesthetic experience, self-efficacy and behaviour change.

Additionally, future studies should compare specific elements of arts-based health
communication programs and strategies, such as the aspect of “rehearsal for life” identified in
this study. Such studies might look more closely at how programs can move from raising awareness of issues to facilitating rehearsal of behaviour change actions, and investigate the outcomes related to both.

The study also indicates that there may be an opportunity for conceptual development of a theory of “aesthetic resonance”. Such a theory might encompass emotional resonance, cultural resonance, and aesthetic experience, or it might differentiate the unique feeling of “resonating” with an artwork or art experience, as distinct from resonance that occurs separate from the arts or aesthetic experiences. A theory of aesthetic resonance might allow for a range of experiences in which the subject matter or stimulus of an artwork or art experience may align with or challenge an individual’s or a group’s values or world view. The theory might embrace current views of resonance that recognize both cognitive distance (as opposed to congruence) and meaning-making as critical to the experience of resonance (McDonnell et al., 2017). Future research on this idea might also encompass the concepts of flow state and self-transcendence given the similarities in the constructs. In relation to art, a notion of aesthetic resonance might, for example, encompass the deep focus of flow state and expansion of conceptual boundaries in self-transcendence along with cultural and emotional resonance.

Further study regarding empathy in relation to the conceptual model is also warranted. Empathy has recently come into sharper focus in the realm of health communication, as the field becomes increasingly interdisciplinary and expands its theoretical basis. As health communication professionals look to the broader field of communications to understand principles of communication and human engagement, empathy is considered to be a significant factor in both engagement and communication. Narrative is a key mechanism for engendering empathy, and is used with increasing intention and regularity in the sphere of health.
communication. Within health communication, narrative is used routinely to engage people emotionally and cognitively through personally and cultural relevant scenarios and characters, which can facilitate empathy.

Additionally, the field of neuroaesthetics presents opportunities for further research on this subject. Neuroaesthetics is a subfield of cognitive neuroscience and investigates the biological mechanisms, specifically the mapping of neural systems, involved in aesthetic experience. The field of neuroaesthetics views aesthetic experiences as “emergent states arising from interactions between sensory–motor, emotion–valuation, and meaning–knowledge neural systems” (Chaterjee and Vartianian, 2014).

Studies conducted in the field of neuroaesthetics could assist in identification of the potential influence of aesthetic experience on behaviour by validating the involvement of memory, attention, emotion, social cognition, in addition to the other primary cognitive processes they define. Such investigations, paired with the philosophical views of aesthetic experience and lived experiences of people who facilitate and participate in arts-based health communication programs, could further illuminate the influence of aesthetic experiences on health behaviour change.

Next steps in my own research will build on this study and my current epidemiological studies designed to explore the impacts of arts and cultural engagement on population health outcomes, and the mechanisms involved, in the US. These epidemiological studies are being undertaken currently in partnership with Dr. Daisy Fancourt at University College London. This work includes analyses of US large-cohort studies as well as experimental studies built on the epidemiological approach to measuring the impact of the arts at a population level developed by
Dr. Daisy Fancourt in the UK. These experiential studies will build on the conceptual model by testing arts-based health communication strategies in community-based comparison studies.
Reference List

(HCP), H. C. P. (2011). The December 2010 Health Communication Partnership (HCP) and the Young Empowered and Healthy (Y.E.A.H.) midterm evaluation survey report (USAIDJHU Associate Cooperative Agreement 617-A-00-07-00005-00).


four diagnostic subgroups. *Quality of life research, 25*(10), 2559-2564. 10.1007/s11136-016-1300-z


https://doi.org/10.1177/1558689820943700


10.1111/1475-6773.12117


10.1080/10410236.2016.1214215


https://doi.org/10.1177/0094306114545742f


https://doi.org/10.2105/ajph.94.12.2053


10.1080/10810730600613807

10.1136/bmj.38636.593461.68

10.1080/14681811.2015.1022820


232


233
https://www.worldcat.org/title/critique-of-judgment/oclc/13796153

Keusch, F. (2013). The role of topic interest and topic salience in online panel web surveys.


https://doi.org/10.1146/annurev.psych.50.1.537

234

10.1093/oxfordhb/9780199811755.001.0001

https://doi.org/10.1111/jaac.12026_3

*Advances in Nursing Science, 40*(1), 51-63. 10.1097/ANS.0000000000000162

An integrative model for health communication. *Communication Theory, 24*(1), 83-103.
https://doi.org/10.1111/comt.12011


theatre to reduce stigma and promote health equity for lesbian, gay, bisexual, and transgender
(LGBT) people in Swaziland and Lesotho. *Health Education & Behavior, 46*(1), 146-156.
10.1177/1090198118760682


the aesthetic experience to music. *Journal of Research in Music Education, 41*(1), 57-69.
https://doi.org/10.2307/3345480


https://docs.lib.purdue.edu/cgi/viewcontent.cgi?article=1045&context=eandc


https://www.ncbi.nlm.nih.gov/books/NBK174174/


https://researchonline.lshtm.ac.uk/id/eprint/18138


https://www.ssc.wisc.edu/~oliver/PROTESTS/ArticleCopies/SnowBenfordResponse.pdf


https://doi.org/10.2307/2095581


https://doi.org/10.1080/10410236.2016.1266743


https://doi.org/10.1145/2601248.2601268


https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6317a1.htm
List of Appendices

Appendix B: Guide to Arts Search Terms for Arts in Health Reviews

Appendix C: PubMed search strategy

Appendix D: Citations for All Articles Included in the Scoping Review

Appendix E: Information about included articles by health issue category

Appendix F: US Arts and Health Communication Survey Study Program Search Protocol and Results by Source

Appendix G: Survey Instrument (in Qualtrics)

Appendix H: Focus Group Discussion Guide for Artists and Public Health/Health Communication Professionals

Appendix I: Focus Group Definitions Handout

Appendix J: Context-Mechanism-Outcome Codebook

Appendix K: Working Definitions of Terms Used in the Conceptual Model
Appendix A: Health Communication and the Arts in the United States: A Scoping Review (final manuscript)


Health Communication and the Arts in the United States: A Scoping Review

Abstract

Objective: Guided by the hypothesis that the arts can play a role in changing attitudes, beliefs and health behaviors, the objectives of the study were to: 1) overview artistic practices, interventions, and research being conducted at the intersection of the arts and health communication; and 2) identify desired and observed outcomes and variables measured in these studies.

Data Source: The search strategy was developed iteratively with two health science librarians and conducted using eight databases (Applied Social Sciences Index and Abstracts, Art and Architecture Source, CINAHL, Communication and Mass Media Complete, ERIC, PsycINFO, PubMed, and Web of Science) and hand searching. Articles included were published between 2014 and 2018.

Study Inclusion and Exclusion Criteria: Inclusion criteria: U.S non-clinical setting; use of the arts (broadly defined) to change health knowledge, beliefs, behaviors or awareness. Any articles not meeting inclusion criteria were excluded.

Data Extraction: Covidence’s data extraction tool exported to MS Excel.

Data Synthesis: This final set of results was analyzed and synthesized by research design, population, sample size, health issue, purpose, variables measured, and findings.

Results: 78 articles met inclusion criteria. Number of participants ranged from 4 to 2,140 (mean=179). 61 (78.2%) outcomes studies, including 8 experimental studies. 17 (21.79%) formative research or reports. Many different health topics were addressed and different art forms used.

Conclusion: The arts can help build knowledge and awareness of health issues. The authors highlight the need to build an evidence base for arts and public health.
Objective

Over time, the arts have been shown to be an effective means of enhancing health communication, even in critical and complex circumstances such as epidemics\textsuperscript{1,2}. However, with the exception of synthesis focused narrowly on entertainment education, evidence synthesis has yet to address the ways in which the arts are used in health communication. To begin addressing this gap, this review examined how the arts have been used to facilitate health communication at the community level in the United States in the past five years (2014 - 2018). This review was grounded in the hypotheses that arts can play a role in changing attitudes, beliefs and health behaviors, and that this role is being examined broadly in recent literature. Our goal was to provide a broad overview of research trends in the arts and health communication guided by two specific objectives:

- To describe the breadth of artistic practices, interventions, and research being conducted at the intersection of the arts and health communication; and
- To identify the desired and observed outcomes and variables measured in arts-based health communication interventions.

Health communication, “the study and use of communication strategies to inform and influence decisions and actions to improve health”, is a key competency in public health\textsuperscript{3}. Health communication was added to the U.S.’s list of Healthy People objectives in 2010 and it has remained a focus for improving population health outcomes and achieving health equity\textsuperscript{4}. Health communication has increasingly emphasized the social ecological model, which recognizes the extent to which the field of public health must interact with a broad diversity of stakeholders to translate evidence for optimal relevance to target audiences\textsuperscript{5}. 
This translational capacity has been enhanced by the long-term adoption of market research and advertising techniques to better deliver health messages to the public, which began in the 1960s. Early health communication efforts leaned heavily on education and persuasion techniques, leading to investments in creative mass media communications and entertainment education programs that utilized the arts\textsuperscript{6,7}. Over the last several decades, health communication practices have evolved significantly, shifting to align with increasing recognition of the extent to which health decisions are shaped not only by knowledge or awareness, but also by stigma, risk perception, and self-efficacy. As part of this shift, health communication programs have increasingly employed the arts to make health information interpretable, persuasive, and actionable in order to reach both broad and targeted audiences and increase people’s ability to use and apply evidence\textsuperscript{4}.

A 2019 World Health Organization report described the arts as activities that “can involve aesthetic engagement, involvement of the imagination, sensory activation, evocation of emotion, and cognitive stimulation”\textsuperscript{8}. While no universal definition of the arts exists, the term commonly refers to active participation in creating works of visual (e.g., painting and drawing), literary (e.g., creative writing and poetry), or performing arts (e.g., theatre, music, and dance), as well as receptive participation as an audience member or consumer. Davies and colleagues\textsuperscript{9} developed five categories of the arts to support population-based health research: 1) performing arts; 2) visual arts, design and crafts; 3) literary arts; 4) community and cultural festivals, fairs and events; and 5) online, digital and electronic arts. This classification articulates numerous ways in which people engage with the arts.

Providing further clarification regarding the arts, this review differentiated between education entertainment (EE)-based health communication programs and arts-based health
communication programs. EE programs are designed to embed prosocial messages into popular entertainment content in order to simultaneously entertain and increase knowledge. An early example of this is the 1988-1992 Harvard Alcohol Project’s National Designated Driver Campaign, which worked with prime-time television shows such as The Cosby Show and Cheers to insert themes related to drunk driving into episodes.

In contrast, arts-based health communication programs recognize and utilize the distinct effects of aesthetic experience as a transformative mechanism. These experiences can result from such operations as formalization, repetition, exaggeration, and elaboration, all of which make ordinary ideas extraordinary and memorable. Thus, arts-based health communication programs are able to attract attention, sustain interest, shape emotions, stimulate memorable responses, and generate shared symbolic systems. All of these effects can contribute to motivating and changing individual and collective choices and behaviors.

**Methods**

The methodological framework of this review was based on the Joanna Briggs Institute’s (JBI) Methodology for JBI Scoping Reviews, which builds on the scoping review framework developed by Arksey and O’Malley. Scoping reviews are conducted to facilitate identification and mapping of evidence and to provide an overview of a research area. Unlike systematic reviews, scoping reviews tend to address broad exploratory research questions and are often undertaken as precursors to narrower systematic reviews. Through systematic literature searching, screening, and analysis, a scoping review rapidly maps key concepts, sources, and types of evidence available.

To inform the review, a preliminary search for existing related systematic and scoping reviews and protocols was carried out in October 2018 using BioMed Central Systematic
Reviews, Campbell Collaboration Education Group, Cochrane Database of Systematic Reviews, Cochrane Public Health Review Group, JBI Database of Systematic Reviews and Implementation Reports, and PROSPERO: International Prospective Register of Systematic Reviews. None of the 12 resulting reviews focused on the U.S. or how the arts are used to improve health communication at the community level.

This review was conducted in parallel with another review that explored how the arts have been used to promote well-being in communities. A protocol for the entire project, inclusive of both searches, was developed using the JBI scoping review protocol guidelines\textsuperscript{14}. Registration with the JBI occurred in January 2019, under the preliminary title “Engaging the Arts in Health Communication and Well-being: A Scoping Review”.

**Data Sources**

This review was designed to capture work done in the recent past and, as a result, the articles selected for inclusion were published between 2014 and 2018. The literature search specifically focused on programs operating at the community or population level rather than at the level of the individual in healthcare settings; the latter has already received generous research attention. The included articles presented research, practice models informed by outcomes data, and theoretical frameworks that had been informed by evidence. To reduce selection bias, two health sciences librarians chose the bibliographic databases and conducted the literature search. Eight databases and grey literature sources were searched to cover various aspects of the topic (educational, health, etc.), and hand-searching was performed to minimize publication bias.

To inform final database selections, the two health science librarians on the research team undertook preliminary test searching in October 2018. The search used Web of Science alongside 13 EBSCO databases and two ProQuest databases selected for their focus on either the
arts, communication, education, or health. The final search was conducted in December using eight databases: Applied Social Sciences Index and Abstracts (ProQuest), Art and Architecture Source (EBSCO), CINAHL (EBSCO), Communication and Mass Media Complete (EBSCO), ERIC (ProQuest), PsycINFO (EBSCO), PubMed, and Web of Science. Available subject headings as well as truncated and phrase-searched keywords in title and abstract fields were used and results were limited to English language full text. Search strategies for each database are available upon request from the corresponding author. The PubMed search strategy is attached as Appendix A.

Search results were exported from the databases into EndNote Web and de-duplicated. Unique references were then exported into the web-based software platform Covidence (https://www.covidence.org/home) in preparation for screening. Subsequently, the team hand-searched the following web archives and databases: National Organization for Arts in Health, Alliance for the Arts in Research Universities, American Art Therapy Association, American Music Therapy Association, University of Florida Center for Arts in Medicine Research Database, and the National Endowment for the Arts. Additional references from the hand-search were added to Covidence.

**Inclusion and Exclusion Criteria**

Research team members in blinded pairs completed the article title and abstract screening and review of full-text papers using Covidence. The reviewers used standardized screening questions within Covidence’s data extraction tool. Each article included in this review required agreement between two reviewers, with a third reviewer arbitrating when necessary. The review’s inclusion criteria were identified using the following PICOS framework:16
o Population (P): Articles focused on studies and interventions that took place in a non-clinical setting within the United States and focused on the population as a community rather than as a series of individuals.

o Intervention (I): Interventions that used the arts to communicate about factors that shape health or health-related experiences.

o Comparator (C): Not applicable

o Outcome (O): Outcomes that pertained to changes in knowledge, beliefs, behaviors, or attitudes that appeared to occur after communication between participants and program implementers. Outcomes included evidence of increased knowledge; changed health beliefs, behaviors or attitudes; enhanced risk perception; reduced stigma; improved cultural acceptance; or improved awareness.

o Study design (S). A broad variety of study designs were included: descriptive articles (i.e., ethnographies, case studies, formative research) and outcomes research that shared empirical or theoretical data about the arts in health communication.

**Data Extraction**

Preliminary data extraction was completed using the platform’s data extraction tool. Results were then exported to MS Excel, where additional data extraction was completed. Two authors (K.S. and V.P.) entered information from each of the 78 articles into this Excel spreadsheet, including research design, population, sample size, health issue, purpose, variables measured, and findings.

**Data Synthesis**

The research team worked together to iteratively group common factors across studies into themes. Arts type and health issue categories were developed through an inductive approach
based on the information presented in the included articles. The study team synthesized the data extracted from the included literature to overview investigations and outcomes related to the arts and health communication.

Results

Numerical Summary

The scoping review literature searches that included database, grey literature, and hand-searching identified 1,633 unique studies for potential inclusion in this review. Following title/abstract screening and full-text screening, 78 articles met the inclusion criteria, which are included here. See Appendix B for the full list of articles.

Figure 1: PRISMA Flow Diagram
These studies varied considerably with regard to sample size, populations studied, research design, and purpose. Types of health issues addressed by the interventions and art forms used to address them varied in the included studies.

**Sample Size and Populations**

Four articles did not specify study sample size or did not focus on one specific study (e.g., general commentaries or reports). Sample size of the studies in the remaining 74 articles ranged from 4 participants to 2,140, with a mean sample size of 178.8 and a median of 63.5. These articles focused on diverse target populations, defined primarily by age (e.g., 4th-8th graders, individuals over age 55), race/ethnicity (e.g., Latinx, African American), health
condition (e.g., individuals diagnosed with or at high risk for diabetes, cancer), or profession (e.g., active-duty Marines, health care professionals).

**Study Design and Purpose**

The 78 included articles were organized into four different categories of study designs, as shown in Table 1 below. Additional information is available in Appendix C.

<table>
<thead>
<tr>
<th>Study Design</th>
<th>Number (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outcomes research</td>
<td>61 (78.2%)</td>
</tr>
<tr>
<td><em>Evaluation</em></td>
<td>37 (47.4%)</td>
</tr>
<tr>
<td><em>Community-based Participatory Research (CBPR)</em></td>
<td>13 (16.7%)</td>
</tr>
<tr>
<td><em>Experimental</em></td>
<td>8 (10.3%)</td>
</tr>
<tr>
<td><em>Quasi-experimental</em></td>
<td>3 (3.8%)</td>
</tr>
<tr>
<td>Descriptive studies</td>
<td>17 (21.79%)</td>
</tr>
<tr>
<td><em>Formative research</em></td>
<td>11 (14.1%)</td>
</tr>
<tr>
<td><em>Commentaries/ethnographies/reports</em></td>
<td>6 (7.69%)</td>
</tr>
</tbody>
</table>

**Outcomes studies.** Studies that were intended to measure results associated with arts-based interventions were grouped in the four categories described below. The outcomes measured in these articles included variables such as *perceived self-efficacy*\(^{17}\), *awareness* about a given health topic\(^{18}\), or *changes in knowledge*\(^{19}\).

**Evaluation studies.** Among the 37 evaluation studies, nearly half (n=16) assessed knowledge and/or awareness, while 5 assessed program satisfaction, and others measured behaviour change (n=7), intent for behaviour change (n=5), and improvements in communication.
(n=4). Many of these interventions were implemented with the goal of increasing knowledge related to a specific health issue. For example, Johnson and colleagues\textsuperscript{20} found an increase in knowledge related to stroke recognition and prevention among 7th graders following a video and drawing program. Similarly, Eisenberg et al.\textsuperscript{21} found increased knowledge about emergency communication among adults with limited English proficiency following participation in a graphic novel intervention.

**Community-based participatory research studies.** The 13 community-based participatory research articles focused on gathering information for the development of interventions (n=2) or better understanding a target population and their perceptions of health issues (n=9), and influencing health behaviors or knowledge (n=2). This category included studies that were grounded in participatory methods such as Participatory Action Research (PAR) or Community-based Participatory Research (CBPR). Eight of these articles used PhotoVoice, engaging the framework proposed by Wang and Burris\textsuperscript{22} to guide participants in creating photographs that generate dialogue and illuminate themes.

A common thread was the pairing of art forms (i.e. photography or storytelling) with dialogue, or the use of the arts to generate discussion. For example, studies examined the mental health concerns of new immigrants through participatory photography\textsuperscript{23}, breast cancer knowledge in African American women through participatory theater\textsuperscript{24}, and Type 2 diabetes management in Somali and Latinx individuals through digital storytelling\textsuperscript{25}. They also elicited participants' identification of challenges such as limited physical activity in middle schoolers\textsuperscript{26} or barriers to enrollment in a national childhood development study\textsuperscript{27}. In addition to producing research findings, participatory strategies were used to improve awareness and knowledge—
including knowledge related to the prevention of teen pregnancy\textsuperscript{28}, tobacco use\textsuperscript{29}, and asthma management\textsuperscript{30}.

**Experimental or quasi-experimental studies.** Eleven articles shared findings of research with intervention and control groups. Among the 8 experimental designs, purposes ranged from investigating the specific mechanisms of an intervention (n=1), to assessing self-efficacy and outcomes expectations (n=2), knowledge, awareness or attitudes (n=4), and behavior change (n=1). Similarly, the three quasi-experimental studies included in this review explored attitudes (n=2) and self-efficacy (n=1). This subset of articles covered a wide range of health issues and art forms, such as storytelling to reduce childhood obesity in Mexican American families\textsuperscript{31}, telenovelas to increase awareness of stress and approaches related to end-of-life decisions\textsuperscript{18}, and video to increase knowledge about cervical cancer\textsuperscript{32}.

**Descriptive studies.** Of the 17 descriptive studies, most (n=14) focused on the development of arts-based interventions while the remainder (n=3) focused on collecting information about a target population for needs assessments or for initial data collection in a longer-term research plan. These studies measured variables such as acceptability and appeal of arts-based interventions\textsuperscript{33} or successful intervention characteristics\textsuperscript{34}.

**Formative studies.** Five of 11 formative study articles focused on interventions for sexual/reproductive health and 2 focused on physical activity, diet, and/or obesity. The purposes ranged from identifying or documenting current health perceptions to testing health messages in order to examine message delivery methods. Findings identified factors that can improve interventions; for example, a preference for vibrant images showing multiple ethnicities in a health education intervention for prostate cancer\textsuperscript{35}. Another study identified stressors and themes that should be included in a graphic novel designed to prepare military personnel for mental...
health challenges in combat zones\textsuperscript{34}. Other articles presented operational research such as identifying values to include in a substance abuse prevention program\textsuperscript{36} or gauging the acceptability of a video game designed to increase human papillomavirus (HPV) awareness\textsuperscript{37}.

**Commentaries, ethnographies, and reports.** These articles provided overviews of programs that used the arts to draw attention to health issues or to the processes that influence health. For example, Schillinger and Huey's\textsuperscript{38} case study described how four young people crafted spoken-word performances based on upstream drivers of diabetes and shared them online. Although changes in knowledge were not measured, the authors described intervention methods and themes that appeared in the spoken-word poems. Azevedo and Robinson\textsuperscript{33} shared ethnographic findings from a dance and education program aimed at reducing obesity in Latina girls and their families. Literat and Chen\textsuperscript{39} offered a theoretical reflection about the ability of storytelling networks to reach at-risk communities with health messages.

**Health Issues and Art Forms**

As noted above, the articles included in this review focused on a wide range of health issues and used a variety of art forms to address those issues (Table 2). See Appendices C and D for a complete listing of health issues and art forms included in each category.

Table 2: Health Issues and Art Forms

<table>
<thead>
<tr>
<th>Health issue (grouped by category)</th>
<th>Count (Percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sexual/reproductive health</td>
<td>15 (19.2%)</td>
</tr>
<tr>
<td>Overall health</td>
<td>11 (14.1%)</td>
</tr>
<tr>
<td>Physical activity/obesity/diet</td>
<td>11 (14.1%)</td>
</tr>
<tr>
<td>Cardiovascular health/diabetes</td>
<td>8 (10.3%)</td>
</tr>
<tr>
<td>Health care decisions/responses</td>
<td>6 (7.7%)</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>Mental health/suicide prevention</td>
<td>6 (7.7%)</td>
</tr>
<tr>
<td>Other chronic diseases</td>
<td>6 (7.7%)</td>
</tr>
<tr>
<td>Environmental health</td>
<td>5 (6.4%)</td>
</tr>
<tr>
<td>Smoking/substance use</td>
<td>4 (5.1%)</td>
</tr>
</tbody>
</table>

Art Form (grouped by category)

<table>
<thead>
<tr>
<th>Photography/Visual Arts</th>
<th>14 (17.9%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixed Arts</td>
<td>13 (16.7%)</td>
</tr>
<tr>
<td>Theatre and Dance</td>
<td>10 (12.8%)</td>
</tr>
<tr>
<td>Digital Arts</td>
<td>8 (10.3%)</td>
</tr>
<tr>
<td>Mass Media</td>
<td>7 (9.0%)</td>
</tr>
<tr>
<td>Film and Video</td>
<td>6 (7.7%)</td>
</tr>
<tr>
<td>Oral Narrative Arts</td>
<td>6 (7.7%)</td>
</tr>
<tr>
<td>Music/Singing</td>
<td>3 (3.8%)</td>
</tr>
</tbody>
</table>

**Health issues.** Sexual/reproductive health was the most common category of health issues addressed by the articles included in this review. This category included investigations centered on general reproductive health and sexually transmitted infection (STI) prevention, cervical cancer/human papillomavirus, and teen pregnancy.

Overall health and physical activity/obesity/diet made up the second most frequently addressed health topics. The overall health category included an array of health issues; for example, a study by Adekeye and colleagues focused on the use of PhotoVoice to identify
health threats and assets perceived by African immigrants. Panosky and Shelton\textsuperscript{44} studied the use of mixed arts to promote healthy behaviors for girls in a correctional facility, and Yang\textsuperscript{45} explored the use of music to promote synchronous parent-child interactions. The physical activity/obesity/diet category included interventions such as storytelling to improve knowledge about childhood obesity in Mexican-American mothers\textsuperscript{24}, manga comics to promote fruit intake in middle schoolers\textsuperscript{46}, and singing to improve nutrition behaviors in older adults\textsuperscript{47}.

\textbf{Figure 2: Art Forms by Health Issue}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure2}
\caption{Art Forms by Health Issue}
\end{figure}

\textbf{Art Forms.} Photography (including PhotoVoice) and visual arts were the most common art forms in the studies, used in 9 of the 10 health-issue categories. Articles in this category included 10 PhotoVoice programs, and 1 study that used photo-elicitation methods to identify perceived barriers to physical activity in older Mexican women\textsuperscript{48}. The photography/visual arts category included one article examining how painting/drawing communicates the experience of
epilepsy\textsuperscript{49}, and another describing a public art and design competition designed to increase the visibility of defibrillators in public spaces\textsuperscript{50}.

Mixed arts interventions--programs that used multiple art forms (n=13)--were nearly as prevalent as photography/visual arts. These included Williams and colleagues\textsuperscript{51} hip hop-themed multimedia classes, intended to reduce the purchase of unhealthy foods by elementary school-aged children. Cueva et al.'s\textsuperscript{19} study used movement, sculpture, and drawing to provide culturally respectful cancer education, and Basting's\textsuperscript{52} work used theater and visual arts to transform the lives of people with dementia.

**Discussion**

In this review, no restrictions were imposed concerning theoretical or methodological approaches, study design, or outcomes measures. As a result, it identified a range of articles and practices—collecting evidence from studies with participant groups ranging from 4 to over 2,000. Notably, only 10\% of studies (n=8) reported on randomized experimental studies or on interventions that were scaled up or conducted at the population level. This may be due to the complex nature of health communication and how health knowledge is produced\textsuperscript{8}.

The 78 included articles presented arts-based health communication studies that reached over 13,200 total participants, suggesting a reasonable potential for systematic review and meta-analysis if more consistent practices and outcomes measures are established. As the arts become more widely and systematically applied in health communication programs and research, more experimental and population-based evidence will likely be produced.

The results align with health communication frameworks that describe the elements of effective communication. For example, the WHO Strategic Communications Framework for Effective Communications\textsuperscript{53} highlights the importance of using visuals, telling real stories, and
using familiar language. A second framework, outlined by Agrawal and colleagues\textsuperscript{54}, emphasizes interventions that are most effective when they: are guided by social-behavioral theory; focus on multiple levels of change (i.e. individual, family, community) in an enabling environment; create community engagement through participatory approaches; and use a mix of media and communication approaches. Social and behavior change communication (SBCC), as evidenced by many of the health communication approaches examined in this review, utilizes the arts because the latter heighten engagement and participation, utilize and build social cohesion, create supportive and enabling environments, and can be engaged across a range of media platforms.

The results also align with a recent WHO scoping review on how the arts improve health and well-being, which noted that arts-based approaches are particularly useful in programming for multicultural groups and for building trust around sensitive health topics\textsuperscript{55}. This work goes on to identify nine components that explain how the arts shape health outcomes. The articles identified in our review primarily engaged seven of these components - aesthetic engagement, involvement of the imagination, sensory activation, evocation of emotion and cognitive stimulation, social interaction, engagement with themes of health - to address health communication goals.

Our review brings to light the broad range of partners and participants that shape the health communication landscape, including schools, healthcare providers and the military. The articles included in the current scoping review engaged numerous multicultural groups, and many studies addressed sensitive topics such as depression, HIV, obesity, and sexual and reproductive health. The included formative research demonstrates that the arts can be used to reach and build relationships with these groups and to shape programs addressing their priorities. The extensive use of photography as a way to generate data and share information is also
noteworthy. While photography is highly accessible, its use as a research method as well as a dissemination method led to the large number of photography-based studies included.

**Gaps, challenges, and limitations.** This review identified several notable gaps and challenges regarding the arts in health communication literature. It confirmed previous assertions that evidence is being collected disproportionately on sexual health, overall health, and diet, resulting in research gaps related to other health issues\(^8,56\). While the interventions studied in these articles seemed to achieve their outcomes with strong acceptability, they faced limitations in how these outcomes were measured. Some overlaps were found among outcomes studied; however, the ways in which these were measured, defined, and labelled varied widely. Outcomes measured ranged, for example, from themes appearing in spoken word poems about diabetes, to changes in knowledge about breast cancer screening, to food purchasing behaviors. Evidence synthesis for the intersection of arts in health communication or public health faces challenges on two bases: the lack of a common taxonomy or terminology for arts-based interventions and reporting, and the lack of consistent outcome measures.

Other limitations included the short format of the review report, which limits discussion of individual studies, particularly given the large number of studies included (see Appendix B for the full list of articles). The U.S. focus and decision to focus on a five-year time period also limited findings. In addition, because the review did not assess research quality, details such as specific intervention methods—including ways in which artists were (or were not) involved—were not clearly reported. Finally, this review shares a limitation with many others related to publication bias: publications on studies with positive outcomes are more likely to be published than studies with negative or neutral outcomes.
Finally, a significant challenge involved defining “the arts” to create an effective search strategy. In an effort to be inclusive and capture the fullest range of arts approaches, the research team created nine categories of art forms (see Appendix D) through an iterative approach that included previous evidence synthesis work by the team, as well as extensive testing of terms informed by classifications created by Davies and colleagues\(^9\) and Fancourt & Finn\(^{57}\). Subsequent studies should utilize and further develop this new classification.

**Practice and policy recommendations.** This review demonstrates the need for a common terminology for reporting on arts-based interventions and consistent outcome measures (core outcomes) to facilitate meta-analyses. In addition, in alignment with recent field reports\(^8,57\), this review suggests that public health practice and policy could benefit from leveraging arts and cultural resources and cross-sector collaborations to strengthen health communication. Finally, this review supports Stuckey and Nobel’s\(^ {56}\) assertion that researchers conducting studies related to the arts in public health should be encouraged to establish meaningful control groups with no intervention or other types of interventions against which to compare arts-based health communication interventions.

**Conclusion**

This review provides a broad overview of how the arts have been used in community health communication programs in the United States. It indicates that the arts are most commonly used in health communication programs addressing sensitive issues such as sexual and reproductive health, as well as those addressing overall health and physical activity. It indicates that the arts have been used as a mechanism for gathering information to better understand target populations and their perceptions of health issues, and that they are also useful in building knowledge and awareness around health issues. In addition, by identifying a lack of
consistency in practices, this review affirms the need for evidence syntheses that can assess outcomes, identify replicable best practices, and guide more consistent outcomes measures.

As the arts become more commonly used in health communication, reviews of the literature will need to be narrower in focus (e.g., examining a specific health issue, art form, or population). This will support the development of a coherent field of arts in public health that can generate best practices, core outcomes, and resources to advance evidence-based practice and research for arts-based health communication programs.

SO WHAT?

What is already known on this topic?

The arts have been shown to be an effective means of enhancing health communication, even in complex circumstances such as epidemics. However, with the exception of synthesis focused on entertainment education, evidence synthesis has yet to address the ways in which the arts are used in health communication.

What does this article add?

The findings of this article indicate that the arts can build knowledge and awareness among target populations. This review affirms the need for evidence syntheses that can assess outcomes, identify replicable best practices, and guide more consistent outcomes measures.

What are the implications for health promotion practice or research?

This review provides information that can guide use of the arts in health communication programs. It demonstrates the need for a common terminology for reporting core outcomes to facilitate meta-analyses. It supports the assertion of other scholars that meaningful control groups should be established to compare arts-based health communication interventions to other intervention type.
References


54. Agrawal PK, Aruldas K, Khan ME. Training manual on basic monitoring and evaluation of social and behavior change communication health programs. 2014.


Appendix B: Arts Search Terms for Arts in Health Reviews

Introduction
This summary is a result of the refinement of search terms undertaken by the Center for Arts in Medicine from 2014-2019. The terms were originally developed for a systematic review of literature focused on use of the arts in health communication programs in global south regions and refined for subsequent evidence synthesis projects related to use of the arts in a community or public health context. The terms are not designed for searches of arts in healthcare literature, but rather, arts in public health literature. The terms were developed in consideration of the challenges of searching literature using the terms “art” and “arts” and the challenge of defining art or the arts. The terms were also developed in consideration of the experiences of the members of the Creating Healthy Communities: Arts + Public Health in America National Research Advisory Group, who shared their experience with building search strategies in similar evidence synthesis projects. An operational definition of the arts was created for the purpose of each of our searches, but this definition is not intended to serve any other purpose or to be generalized in any way.

Defining Art for the Purpose of Evidence Synthesis
While there is no single presiding definition of art to call upon, for the purpose of our evidence synthesis projects, we created the following operational definition of “the arts”:

Various branches of creative activity involving aesthetic experience, principles or criteria, including performing art forms such as dance, music, storytelling, and theatre; visual art forms such as painting, drawing, murals, film and sculpture; and literary art forms such as poetry, prose, and graphic novels.

Recognizing the confounding nature of the terms “art” and “arts”, we developed a complex search strategy that includes those terms and also specifies a broad range of specific creative, aesthetic and arts activities and forms.
Exclusion of terms that use ART as an acronym is key to these search strategies.

Search Terms
The following broadly inclusive search terms were used within a PICO framework to represent “the arts” in conjunction with sets of terms representing other dimensions of the searches.

art OR arts OR artist OR artists OR artistic OR artistry OR artistries OR quilt OR quilting OR quilts OR quilted OR chalk OR “TV” OR stamp OR stamping OR stamps OR origami OR needlework OR stitchery OR woodwork OR woodworking OR woodturning OR “basket making” OR “basket weaving” OR batik OR batiks OR calligraphy OR calligraphic OR carve OR carves OR carved OR carving OR sketch OR sketches OR sketching OR illustration* OR enamel OR enamels OR enameling OR engrave OR engraved OR engraving OR gardening OR landscape OR landscapes OR landscaping OR landscaped OR ikebana OR bonsai OR “floral arrangement” OR “floral arrangements” OR “floral arranging” OR “flower arrangement” OR “flower arrangements” OR “flower arranging” OR lithograph* OR printmak* OR “print making” OR “print maker” OR “print makers” OR “silk screen” OR “silk screens” OR “silk screened” OR “silk screening” OR “jewelry making” OR weaving OR woven OR metalwork* OR “metal work” OR “metal working” OR “tin smithing” OR “silver smithing” OR blacksmiting OR acting OR playwriting OR “writing plays” OR “play writer” OR “play write” OR “play writing” OR jazz OR "art based" OR "arts based" OR "creative effort" OR "creative efforts" OR "creative engagement" OR "creative expression" OR "creative expressions" OR "creative medicine" OR "creative practice" OR "creative therapy" OR "creative therapies" OR
"creative writing" OR "diary writing" OR diaries OR "emotional writing" OR “group writing” OR "entertainment education" OR "expressive activity" OR "expressive activities" OR "expressive writing" OR "graphic novel" OR "graphic novels" OR "graphic representation" OR "graphic representations" OR "health humanities" OR "journal writing" OR "medical humanities" OR "movement expression" OR "movement expressions" OR "movement therapy" OR "movement therapies" OR "narrative medicine" OR "passive listening" OR "play space" OR "play spaces" OR "role play" OR “role playing” OR “role plays” OR acrylics OR animation* OR artwork* OR ballet OR caricature OR caricatures OR cartoon* OR chants OR chanting OR choir OR choreography OR choreographing OR choreographe* OR clay OR collag* OR comic OR comics OR comicbook* OR danc* OR drama* OR drawing* OR edutainment OR etching* OR film OR films OR filming OR filmed OR fotonovela* OR photonovella* OR handicraft* OR crafts OR crafting OR imaginative OR improvisation* OR journaling OR mandala* OR mural* OR museum* OR music* OR novela* OR novella* OR opera* OR paint* OR photograph* OR photovoice OR “photo voice” OR pictorial OR plays OR poet* OR poem* OR portrait* OR pottery OR puppet* OR radio OR rap OR raps OR rapping OR sandplay* OR sculpt* OR sing OR singing OR skit OR skits OR song* OR story OR stories OR storyline* OR storytell* OR essay OR essays OR television OR textiles OR theatr* OR theater* OR transmedia OR vlog* OR watercolor* OR “water color” OR “water colors” OR “water colour” OR “water colours” OR watercolour* OR youtube OR “you tube” OR movie* OR cinema OR ceramics OR imagery OR mosaic* OR lyrics OR graffiti OR “hip hop” OR aesthetic* OR esthetic* OR “glass blowing” OR “glass fusing” OR knitting OR “rug hooking” OR crochet*  NOT (antiretroviral OR “anti retroviral” OR “HAART” OR “assisted reproductive therap*” OR “state of the art")

The following slightly less inclusive search terms may also be used:
art OR arts OR artist OR artists OR artistic OR artistry OR artistries OR quilt OR quilting OR quilts OR printmak* OR “print making” OR “print maker” OR “print makers” OR “silk screen” OR “silk screens” OR “silk screened” OR “silk screening” OR acting OR playwriting OR “writing plays” OR “play writer” OR “play write” OR “play writing” OR jazz OR "art based" OR "arts based" OR "creative effort" OR "creative efforts" OR "creative engagement" OR "creative expression" OR "creative expressions" OR "creative medicine" OR "creative practice" OR "creative therapy" OR "creative therapies" OR "creative writing" OR “group writing” OR gardening OR "entertainment education" OR "expressive activity" OR "expressive activities" OR "expressive writing" OR "graphic novel" OR "graphic novels" " OR "journal writing” OR "movement expression" OR "movement therapies" OR "movement therapies" OR "role play" OR “role playing” OR “role plays” OR animation* OR artwork* OR ballet OR caricature OR caricatures OR cartoon* OR choir OR choreography OR choreographing OR choreographe* OR clay OR collag* OR comic OR comics OR comicbook* OR danc* OR drama* OR drawing* OR edutainment OR film OR films OR filming OR fotonovela* OR photonovella* OR handicraft* OR crafts OR crafting OR improvisation* OR journaling OR mandala* OR mural* OR museum* OR music* OR novela* OR novella* OR opera* OR paint* OR photograph* OR photovoice OR “photo voice” OR pictorial OR plays OR poet* OR poem* OR portrait* OR pottery OR puppet* OR radio OR rap OR raps OR rapping OR sculpt* OR sing OR singing OR skit OR skits OR song* OR story OR stories OR storyline* OR storytell* OR textiles OR theatr* OR theater* OR transmedia OR watercolor* OR “water color” OR “water colours” OR “water colour” OR “water colours" OR watercolour* OR ceramics OR mosaic* OR lyrics OR graffiti OR “hip hop” OR aesthetic* OR esthetic* OR “spoken word”
NOT (antiretroviral OR “anti retroviral” OR “HAART” OR “assisted reproductive therap*” OR “state of the art”)

**Potentially Confounding Terms**
Numerous terms were determined to be potentially or particularly problematic in searches of arts + public health literatures. These terms include:

- Wellbeing
- Novel
- Narrative
- Video
- Create*
- Media
- Culture/cultural
- Characters
- Drawing
- Acts
- Actors
- Woven
- Theatre/theater
- Performance

Use of these terms should tested prior to running final searches.
Appendix C: PubMed search strategy

antiretroviral[tiab] OR “anti retroviral”[tiab] OR “HAART”[tiab] OR “assisted reproductive therapy”[tiab] OR “assisted reproductive therapy”[tiab] OR “state of the art”[tiab])


# 1 AND #2 AND #3 AND #4
#5, Filters: English; Publication date from 2014/01/01 to 2018/12/31; Humans
Appendix D: Citations for All Articles Included in the Scoping Review


Cooper CP, Gelb CA, Chu J. What's the appeal? testing public service advertisements to raise awareness about gynecologic cancer. *Journal of Women's Health (15409996).* 2014;23(6):488-


Noone J, Castillo N, Allen TL, Esqueda T. Latino teen theater: A theater intervention to promote latino parent-adolescent sexual communication. *Hispanic health care international: the


Zellner Lawrence T, Henry Akintobi T, Miller A, Archie-Booker E, Johnson T, Evans D.

### Appendix E: Information about included articles by health issue category

<table>
<thead>
<tr>
<th>Art Type(s)</th>
<th>References</th>
<th>Research Design</th>
<th>Population</th>
<th>N=</th>
<th>Purpose</th>
<th>Variables measured</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category</td>
<td>Authors</td>
<td>Method</td>
<td>Sample Size</td>
<td>Objective</td>
<td>Tool/Results</td>
<td></td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-------------------------------------------------------------------------</td>
<td>----------------------------</td>
<td>-------------</td>
<td>---------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Storytelling</td>
<td>Kim WS, Shin CN, Kathryn Larkey L, Roe DJ.</td>
<td>Evaluation research</td>
<td>Latino men and women</td>
<td>To develop a narrative quality assessment tool for measuring elements of storytelling to predict attitude and behavior change.</td>
<td>Scales related to narrative characteristics, identification, and transportation.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Development and validation of the narrative quality assessment tool. <em>J Nurs Meas.</em> 2017</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Theatre</td>
<td>Beach WA, Buller MK, Dozier DM, Buller DB, Gutzmer K.</td>
<td>Evaluation research</td>
<td>Cancer patients/survivors, family members, and health care providers.</td>
<td>To change opinions about the importance of family communication in the midst of cancer.</td>
<td>Opinions about cancer and family communication, key communication activities, and self-efficacy.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The conversations about cancer (CAC) project: Assessing feasibility and audience impacts from viewing the cancer play. <em>Health Commun.</em> 2014</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Breast care screening for underserved African American women: Community-based participatory</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Cardiovascular health/diabetes

<table>
<thead>
<tr>
<th>Art Type(s)</th>
<th>References</th>
<th>Research Design</th>
<th>Population</th>
<th>N=</th>
<th>Purpose</th>
<th>Variables measured</th>
</tr>
</thead>
<tbody>
<tr>
<td>Music</td>
<td>Omelchenko KL, Hall CA, Gainey ME, Olson GE. Rhythms of the heart: An interprofessional community health collaboration to increase cardiovascular health knowledge. <em>The Health Education Journal</em>. 2018</td>
<td>Evaluation research</td>
<td>Event guests</td>
<td>275</td>
<td>To provide cardiovascular health education and screening</td>
<td>Feedback about the intervention</td>
</tr>
<tr>
<td>Method</td>
<td>Authors</td>
<td>Description</td>
<td>Sample Size</td>
<td>Purpose</td>
<td>Findings/Themes</td>
<td></td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>-------------</td>
<td>-------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Art Type(s)</td>
<td>References</td>
<td>Research Design</td>
<td>Population</td>
<td>N=</td>
<td>Purpose</td>
<td>Variables measured</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-----------------</td>
<td>------------</td>
<td>----</td>
<td>-------------------------------------------------------------------------</td>
<td>---------------------------------------------------------</td>
</tr>
<tr>
<td>Spoken word videos</td>
<td>Schillinger D, Huey N. Messengers of truth and Health—Young artists of color raise their voices to prevent diabetes. <em>JAMA</em>. 2018</td>
<td>Case study</td>
<td>Young people, age 17-24</td>
<td>4</td>
<td>To shift the conversation about diabetes toward its social and environmental drivers</td>
<td>Themes that appear in spoken word poems.</td>
</tr>
<tr>
<td>Storytelling slide shows</td>
<td>Bertera EM. Storytelling slide shows to improve diabetes and high blood pressure knowledge and self-efficacy: Three-year results among community dwelling older African Americans. <em>Educational Gerontology</em>. 2014</td>
<td>Quasi-experimental</td>
<td>African Americans, age over 55</td>
<td>429</td>
<td>To increase self-efficacy and knowledge of high blood pressure and type 2 diabetes management behaviors</td>
<td>Attitudes, Self-efficacy and knowledge related to diabetes and hypertension</td>
</tr>
<tr>
<td>Videos and drawing (participatory)</td>
<td>Johnson AB, Montgomery CM, Dillard WA, et al. Effect of visual art school-based stroke intervention for middle school students. <em>Journal of Neuroscience Nursing</em>. 2017</td>
<td>Evaluation research</td>
<td>7th graders</td>
<td>25</td>
<td>To raise stroke awareness</td>
<td>Knowledge about stroke and ability to share this knowledge</td>
</tr>
<tr>
<td>Method</td>
<td>Authors</td>
<td>Title</td>
<td>Study Population</td>
<td>Sample Size</td>
<td>Goals</td>
<td>Outcomes</td>
</tr>
<tr>
<td>-----------------</td>
<td>----------------------------------</td>
<td>-----------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
<td>-------------</td>
<td>----------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Photography</td>
<td>Postma J, Ramon C.</td>
<td>Strengthening community capacity for environmental health promotion through photovoice. <em>Public Health Nursing.</em> 2016</td>
<td>Community based participatory research</td>
<td></td>
<td>To identify perceptions about housing issues and strengthen community capacity to promote healthy and affordable housing</td>
<td>Perception of housing issues</td>
</tr>
<tr>
<td>Photography &amp; Video</td>
<td>Kilanowski JF.</td>
<td>Latino migrant farmworker student development of safety instructional videos for peer education. <em>J Agromed.</em> 2014</td>
<td>Evaluation research</td>
<td></td>
<td>To educate about safety</td>
<td>Safety knowledge</td>
</tr>
<tr>
<td>Evaluation research</td>
<td>Adult African Americans of low socioeconomic status</td>
<td>149</td>
<td>To educate about foodborne illnesses</td>
<td>Food safety knowledge score</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaluation research</td>
<td>Middle school students and teachers</td>
<td>175</td>
<td>To increase knowledge about the prevention of rat lungworm disease</td>
<td>Knowledge and behavior change</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Health care decisions/responses

<table>
<thead>
<tr>
<th>Art Type(s)</th>
<th>References</th>
<th>Research Design</th>
<th>Population</th>
<th>N=</th>
<th>Purpose</th>
<th>Variables measured</th>
</tr>
</thead>
</table>

310
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Telenovela</td>
<td>Crist JD, Pasvogel A, Hepworth JT, Koerner KM. The impact of a telenovela intervention on use of home health care services and Mexican decent</td>
<td>Experimental</td>
<td>74 older adult–caregivers of Mexican decent</td>
<td>148</td>
<td>To increase awareness of home health care services. Awareness of and confidence in home health care services</td>
</tr>
<tr>
<td>Source</td>
<td>Authors</td>
<td>Methodology</td>
<td>Group</td>
<td>Sample Size</td>
<td>Outcome</td>
</tr>
<tr>
<td>------------</td>
<td>------------------------------------------------------------------------</td>
<td>----------------------</td>
<td>----------------</td>
<td>-------------</td>
<td>---------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Telenovela</td>
<td>Cruz-Oliver D, Malmstrom TKP, Roegner, Michael M. D. M. A., Yeo GPA.</td>
<td>Experimental</td>
<td>Health care professionals</td>
<td>142</td>
<td>To increase awareness of caregivers' stress and patients' cultural approaches to end-of-life care decisions</td>
</tr>
<tr>
<td>Television</td>
<td>Khalil GE, Rintamaki LS.</td>
<td>Evaluation research</td>
<td>Viewers</td>
<td>1325</td>
<td>To promote organ donation</td>
</tr>
<tr>
<td>Art Type(s)</td>
<td>References</td>
<td>Research Design</td>
<td>Population</td>
<td>N=</td>
<td>Purpose</td>
</tr>
<tr>
<td>---------------------</td>
<td>----------------------------------------------------------------------------</td>
<td>--------------------------</td>
<td>----------------------</td>
<td>------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Video (participatory)</td>
<td>Warren CM, Knight R, Holl JL, Gupta RS. Using videovoice methods to enhance community outreach and engagement for the national children’s study. <em>Health Promotion Practice</em>. 2014</td>
<td>Community based participatory research</td>
<td>Ethnic minority individuals</td>
<td>8</td>
<td>To identify and address issues related to community health and the implementation of the National Children's Study</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Understanding of community needs, strengths, and interests. Themes of videos.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Theatre</td>
<td>Keller SN, Wilkinson T. Preventing suicide in Montana: A community-based theatre intervention. <em>Journal of Social Marketing</em>, 2017</td>
<td>Evaluation research</td>
<td>High School Students</td>
<td>217</td>
<td>To educate about the high prevalence of suicide in Montana and increase open communication about the topic</td>
</tr>
<tr>
<td>Theatre (participatory)</td>
<td>Keller SN, Austin CG, McNeill V. A theater intervention to promote communication and disclosure of suicidal ideation. <em>Journal of Applied Communication Research</em>, 2017</td>
<td>Evaluation research</td>
<td>Young adults</td>
<td>27</td>
<td>To increase awareness and use of suicide-prevention resources</td>
</tr>
</tbody>
</table>
Transmedia | Heilemann MV, Martinez A, Soderlund PD. A mental health storytelling intervention using transmedia to engage Latinas: Grounded theory analysis of participants’ perceptions of the story’s main character. *Journal of Medical Internet Research*. 2018

Evaluation research | Latina women with anxiety and depression | 28 | To increase knowledge about symptom management resources | Perceptions of the story and character.

<table>
<thead>
<tr>
<th>Art Type(s)</th>
<th>References</th>
<th>Research Design</th>
<th>Population</th>
<th>N=</th>
<th>Purpose</th>
<th>Variables measured</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methodology</td>
<td>Authors</td>
<td>Title</td>
<td>Artistic Focus</td>
<td>Population</td>
<td>Objectives</td>
<td>Themes</td>
</tr>
<tr>
<td>-------------</td>
<td>---------</td>
<td>-------</td>
<td>---------------</td>
<td>------------</td>
<td>------------</td>
<td>--------</td>
</tr>
<tr>
<td>Painting and drawing</td>
<td>Schachter SC.</td>
<td>Epilepsy and art: Windows into complexity and comorbidities.</td>
<td>Phenomenological Artists with epilepsy</td>
<td>not specified</td>
<td>To gain understanding of the experiences of people with epilepsy</td>
<td>Themes that appear in art created by people with epilepsy</td>
</tr>
<tr>
<td>Photography (participatory)</td>
<td>Ives B, Nedelman M, Redwood C, et al.</td>
<td>Vision voice: A multimedia exploration of diabetes and vision loss in east Harlem.</td>
<td>Community based participatory research Latina women with vision problems, age 31-65</td>
<td>4</td>
<td>To understand the needs and experiences of people living with vision loss</td>
<td>Themes identified related to decreased vision</td>
</tr>
<tr>
<td>Photography and Video (participatory)</td>
<td>Yarbrough M, Blumenstock J, Warren C, et al. SMART (student media-based asthma research team): Engaging adolescents to understand asthma in their communities. <em>Progress in community health partnerships: research, education, and action</em>. 2016</td>
<td>Community based participatory research</td>
<td>Students with asthma, their parents, student peers</td>
<td>111</td>
<td>To improve asthma management and community support</td>
<td>Themes and perceptions about asthma, perceptions about the intervention, asthma management behaviors, asthma-related quality of life</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------</td>
<td>-----------------------------------------------</td>
<td>------</td>
<td>-----------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Photonovela</td>
<td>Grigsby TJ, Unger JB, Molina GB, Baron M. Evaluation of an audio-visual novela to improve beliefs, attitudes and knowledge toward dementia: A mixed-methods approach. <em>Clin Gerontol</em>. 2017</td>
<td>Evaluation research</td>
<td>Adults, mainly Hispanic/Latino women</td>
<td>42</td>
<td>To improve attitudes, knowledge, and beliefs about dementia</td>
<td>Knowledge, attitudes, and beliefs</td>
</tr>
<tr>
<td>Theatre, visual arts</td>
<td>Basting A. Building creative communities of care: Arts, dementia, and hope in the United States. <em>Dementia (London, England).</em> 2018</td>
<td>Case study</td>
<td>N/A</td>
<td>N/A</td>
<td>To transform the lived experiences of dementia</td>
<td>Best practices of the intervention</td>
</tr>
</tbody>
</table>

<p>| Overall health |</p>
<table>
<thead>
<tr>
<th>Art Type(s)</th>
<th>References</th>
<th>Research Design</th>
<th>Population</th>
<th>N=</th>
<th>Purpose</th>
<th>Variables measured</th>
</tr>
</thead>
<tbody>
<tr>
<td>Film/Video</td>
<td>Film/Video</td>
<td>Commentary article</td>
<td>Theoretical article</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>-----------</td>
<td>-----------</td>
<td>-------------------</td>
<td>-------------------</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>Music, theater, dance, visual arts, literature, multimedia and design, Hanna GP, Noelker LS, Bienvenu B. The arts, health, and aging in America: 2005-2015. Gerontologist. 2015</td>
<td>Report</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Adekeye O, Kimbrough J, Obafemi B, Strack RW. Health literacy from the perspective of African immigrant youth and elderly: A photo voice project. Journal of Health Care for the Poor &amp; Underserved. 2014</td>
<td>African Immigrants (elderly and youth)</td>
<td>15</td>
<td>To investigate health perceptions</td>
<td>Themes of photographs and discussions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poetry</td>
<td>Robinson JN, Stanford J, Webb FJ. HealthSpeaks: Using poetry in development of health education curriculum. <em>Journal of Health Education Teaching.</em> 2018</td>
<td>Evaluation research</td>
<td>Junior High School students, age 11-18</td>
<td>17</td>
<td>To increase knowledge about health behaviors and health conditions</td>
<td>Satisfaction with the curriculum</td>
</tr>
<tr>
<td>------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------</td>
<td>---------------------</td>
<td>----------------------------------------</td>
<td>----</td>
<td>------------------------------------------------------------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>Radio Program (participatory)</td>
<td>Chico-Jarillo T, Crozier A, Teufel-Shone N, Hutchens T, George M. A brief evaluation of a project to engage American Indian young people as agents of change in health promotion through radio programming, Arizona, 2009-2013. <em>Preventing chronic disease.</em> 2016</td>
<td>Evaluation research</td>
<td>American Indian youth, age 10-21</td>
<td>37</td>
<td>To engage young people in creating locally relevant stories of a fictitious family working to make lifestyle changes and to share the stories with the community</td>
<td>Participants' perceptions of the program</td>
</tr>
<tr>
<td>Storytelling</td>
<td>Heaton B, Gebel C, Crawford A, et al. Using storytelling to address oral health knowledge in American Indian and Alaska native communities. <em>Preventing Chronic Disease.</em> 2018</td>
<td>Evaluation research</td>
<td>American Indian and Alaskan Native mothers</td>
<td>53</td>
<td>To communicate messages about oral health</td>
<td>Participants' perceptions of the storytelling program</td>
</tr>
<tr>
<td>Theatre</td>
<td>Taylor J, Namey E, Carrington Johnson A, Guest G. Beyond the page: A process review of using ethnodrama to disseminate research findings. <em>J Health Commun.</em> 2017</td>
<td>Evaluation research</td>
<td>Audience members</td>
<td>134</td>
<td>To increase men's health seeking behaviors</td>
<td>Audience feedback and lessons learned</td>
</tr>
<tr>
<td>---------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------</td>
<td>-------------------</td>
<td>-----</td>
<td>------------------------------------------</td>
<td>----------------------------------------</td>
</tr>
</tbody>
</table>

### Physical activity/obesity/diet

<table>
<thead>
<tr>
<th>Art Type(s)</th>
<th>References</th>
<th>Research Design</th>
<th>Population</th>
<th>N=</th>
<th>Purpose</th>
<th>Variables measured</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dance</td>
<td>Azevedo KJ, Robinson TN. Anthropology in the design of preventive behavioral health programs for children and families living in disadvantaged neighborhoods. <em>Annals of Anthropological Practice.</em> 2015</td>
<td>Ethnography</td>
<td>Latina girls, age 9-11</td>
<td>252</td>
<td>To prevent obesity</td>
<td>Perceptions of program participants and how the program was implemented</td>
</tr>
<tr>
<td>Hip-hop themed multimedia classes</td>
<td>Williams O, DeSorbo A, Sawyer V, et al. Hip hop HEALS. <em>Health Education &amp; Behavior</em>. 2016</td>
<td>Evaluation research</td>
<td>Elementary school students</td>
<td>225</td>
<td>To reduce the purchase of unhealthy foods</td>
<td>Food purchasing behaviors</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-------------------------------------------------</td>
<td>------------------</td>
<td>--------------------------</td>
<td>-----</td>
<td>---------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Manga comics</td>
<td>Leung MM, Green MC, Tate DF, Cai J, Wyka K, Ammerman AS. Fight for your right to fruit: Psychosocial outcomes of a manga comic promoting fruit consumption in middle-school youth. <em>Health Commun</em>. 2017</td>
<td>Experimantal</td>
<td>Middle school students</td>
<td>263</td>
<td>To promote fruit intake</td>
<td>Outcome expectation s related to fruit intake, perceived transportati on into the story, and enjoyment.</td>
</tr>
<tr>
<td>Photograph y (participatory)</td>
<td>Hamilton KC, Richardson MT, Owens T, Yerby LG, Lucky FL, Higginbotham JC. Using photovoice to identify the physical activity practices of children residing in Alabama’s black belt region. <em>J Community Pract.</em> 2017</td>
<td>Formative research</td>
<td>African American girls and boys, age 9-13</td>
<td>12</td>
<td>To document physical activity preferences to design a subsequent intervention</td>
<td>Factors identified by participants as influencing physical activity. Evaluation of the program by participants.</td>
</tr>
<tr>
<td>Photograph y (participatory)</td>
<td>Morales-Campos D, Parra-Medina D, Esparza LA. Picture this!: Using participatory photo mapping with Hispanic girls. <em>Fam Community Health.</em> 2015</td>
<td>Communit y based participatory research</td>
<td>Hispanic middle school girls, age 11-14</td>
<td>40</td>
<td>To foster creative interventions to address obesity and increase physical activity</td>
<td>Girls' satisfaction with the intervention.</td>
</tr>
<tr>
<td>Singing</td>
<td>McClelland JW, Jayaratne KS, Bird C. Use of song as an effective teaching strategy for nutrition education in older adults. <em>Journal of nutrition in gerontology and geriatrics.</em> 2015</td>
<td>Experimen tal</td>
<td>Older adults</td>
<td>458</td>
<td>To improve knowledge about nutrition</td>
<td>Nutrition knowledge</td>
</tr>
<tr>
<td>Videos, songs, and visual art work</td>
<td>Criss S, Cheung L, Giles C, et al. Media competition implementation for the Massachusetts childhood obesity research demonstration study (MA-CORD): Adoption and reach. <em>International journal of environmental research and public health.</em> 2016</td>
<td>Evaluation research</td>
<td>Students, Kindergarten-8th grade</td>
<td>595</td>
<td>To reduce childhood obesity</td>
<td>Program adoption by schools and reach within these programs</td>
</tr>
</tbody>
</table>

### Sexual/reproductive health

<table>
<thead>
<tr>
<th>Art Type(s)</th>
<th>References</th>
<th>Research Design</th>
<th>Population</th>
<th>N=</th>
<th>Purpose</th>
<th>Variables measured</th>
</tr>
</thead>
<tbody>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Journaling</td>
<td>Bute JJ, Comer K, Lauten KM, et al. Implementation of a journal prototype for pregnant and parenting adolescents. <em>Eval Program Plann</em>. 2014</td>
<td>Evaluation Research</td>
<td>Teens who were pregnant or recently had a child</td>
<td>52</td>
<td>To communicate health information and provide a means of self-expression</td>
<td>Themes related to lessons learned from the intervention</td>
</tr>
<tr>
<td>Photographs and sound</td>
<td>Cooper CP, Gelb CA, Chu J. What's the appeal? testing public service advertisements to raise awareness about gynecologic cancer. <em>Journal of Women's Health</em>. 2014</td>
<td>Formative research</td>
<td>Women, age 35–64</td>
<td>175</td>
<td>To increase knowledge about gynecologic cancers</td>
<td>Concepts that resonated with participants</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>------------------</td>
<td>------------------</td>
<td>-----</td>
<td>---------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Theatre</td>
<td>Lightfoot AF, T.  ‘I learned to be okay with talking about sex and safety’: Assessing the efficacy of a theatre-based HIV prevention approach for adolescents in North Carolina. <em>Sex Education</em>. 2015</td>
<td>Quasi-experimental</td>
<td>Ninth graders</td>
<td>317</td>
<td>To educate young people about sexual health</td>
<td>Knowledge, attitudes, and awareness</td>
</tr>
<tr>
<td>---------</td>
<td>---------------------------------------------------------------------------------------------------------------</td>
<td>-------------------</td>
<td>--------------</td>
<td>-----</td>
<td>--------------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>------------------</td>
<td>-----------------</td>
<td>-----</td>
<td>---------------------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Art Type(s)</td>
<td>References</td>
<td>Research Design</td>
<td>Population</td>
<td>N=</td>
<td>Purpose</td>
<td>Variables measured</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-----------------</td>
<td>----------------------</td>
<td>-----</td>
<td>-------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Brochures, posters,</td>
<td>Butler KM, Rayens MK, Adkins S, et al. Culturally-specific smoking cessation</td>
<td>Evaluation</td>
<td>Adult Smokers</td>
<td>251</td>
<td>To encourage smoking cessation behaviors</td>
<td>Intention to stop smoking, talking to a health care provider about stopping smoking</td>
</tr>
<tr>
<td>advertisments, quilts</td>
<td>outreach in a rural community. <em>Public Health Nursing.</em> 2014</td>
<td>research</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------</td>
<td>-----------------------------</td>
<td>-----</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Video</td>
<td>Pinsker EA, Call KT, Tanaka A, et al. The development of culturally appropriate tobacco prevention videos targeted toward Somali youth. <em>Progress in community health partnerships: research, education, and action</em>. 2017</td>
<td>Community based participatory research</td>
<td>Somali Immigrant youth</td>
<td>52</td>
<td>To prevent tobacco use</td>
<td>Positive and negative feedback about the videos</td>
</tr>
</tbody>
</table>
Appendix F: US Arts and Health Communication Survey Study Program Search Protocol and Results by Source

Specific aim: to identify programs and individuals in the United States that use the arts as a means for health communication.

Search Dates: January 5 – April 27, 2017

Guiding definitions and descriptions

- Arts:
  - imaginative, creative, and nonscientific branches of knowledge considered collectively, especially as studied academically (British Dictionary)
  - The class of objects subject to aesthetic criteria (dictionary.com)
  - The expression or application of human creative skill and imagination (Oxford Dictionary)
  - Modalities that create or facilitate the creation of works to be appreciated primarily for their beauty or emotional power (Kristeller, 199; Shiner, 2001; Davies, 2006)
  - Forms of expression, including the visual, performing and literary arts, which may include drama, music, writing, visual arts, dance, and any interdisciplinary, multidisciplinary, or sub-disciplinary component.

- Artist:
  - a person who produces works in any of the arts that are primarily subject to aesthetic criteria (dictionary.com)
  - Persons that have skill and training in the art form(s) they represent
  - a person who practices or is skilled in an art, such as painting, drawing, or sculpture (British Dictionary)
  - a person who displays in his work qualities required in art, such as sensibility and imagination (British Dictionary)
  - a person whose profession requires artistic expertise, such as a designer (a commercial artist) (British Dictionary)

- Health communication
  - A two-way exchange of information that seeks to make health-related evidence interpretable, persuasive, and actionable (McCormack et al, 2013)
  - Communication that seeks to inform, influence and support individual and community decisions that affect health (Freimuth & Quinn, 2004)
  - Communication inclusive of a health messaging intent to convey vital health information to a target population of people via healthcare and public health workers, governmental agencies, or others.
  - Formats may include visual, audio, narrative, personal, artistic, media-based, social, and other forms of communication

- Arts-based health communication programs
  - programs that use the arts, as defined above, to facilitate health communication, as defined above
  - May be developed and implemented by public health, community health, health, arts, community, cultural, or other organizations, or through partnership between such organizations
**Types of Organizations/Institutional Settings:** not for profit, for-profit, academic, non-governmental (NGO), governmental, private foundation, public health, community health, arts, culture, community service, faith-based, school.

**Search Procedures**

*Database Searching:*  
- PubMed  
- CINAHL  
- Web of Science  
- Taylor & Francis

*Grey Literature/Hand Searching:*  
- Keyword Google search  
- Keyword Google Scholar search  
- Journal searches:  
  - Health Communication  
  - Arts & Health: An International Journal for Research, Policy and Practice  
  - Journal of Applied Arts and Health  
  - International Journal of Health Communication  
  - Research and Drama Education  
  - Applied Theatre Research Journal  
  - Journal of Arts in Communities  
  - Journal of Applied Theatre and Performance

- Snowballing (Cooke & Campbell, 2004; Greenhalgh & Peacock, 2005)
- American Public Health Association Conference Abstracts

**Inclusion/Exclusion Criteria**

**Inclusion Criteria:**  
- Programs that are currently running or having activity within the past two years (2015-present)  
- Programs that have a clear and significant focus on health issues or health-related social issues  
- Programs that operate from a health communication mission or objective in a public health context  
- Programs that are created with the intent to make or use forms of art as a means for health communication  
- Programs that involve professional artists or a clearly defined arts practices  
- Programs that are located in and serve populations in the United States  
- At least one individual directly involved with the program must be able to complete the survey in English  
- Must be 18 years of age or older

**Exclusion Criteria:**  
- Programs that have concluded activity or operations more than two years ago (prior to 2015)
• Art works focused on health topics or issues that are not created with the intent of being used for health communication
• Media or social media campaigns that are not developed specifically as works of art or arts processes

<table>
<thead>
<tr>
<th>Search Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art Term</td>
</tr>
<tr>
<td>Theater</td>
</tr>
<tr>
<td>Music</td>
</tr>
<tr>
<td>Educational (art term)</td>
</tr>
<tr>
<td>Drama</td>
</tr>
<tr>
<td>Sculpture</td>
</tr>
<tr>
<td>Plays</td>
</tr>
<tr>
<td>Visual Art</td>
</tr>
<tr>
<td>Stage</td>
</tr>
<tr>
<td>Art Program</td>
</tr>
<tr>
<td>Community Theater</td>
</tr>
<tr>
<td>TV Shows</td>
</tr>
<tr>
<td>Video</td>
</tr>
<tr>
<td>Murals</td>
</tr>
<tr>
<td>Dancing</td>
</tr>
<tr>
<td>Performance</td>
</tr>
<tr>
<td>Musicals</td>
</tr>
<tr>
<td>Singing</td>
</tr>
<tr>
<td>modern art</td>
</tr>
<tr>
<td>Drawings</td>
</tr>
<tr>
<td>Creative Arts</td>
</tr>
<tr>
<td>music video</td>
</tr>
<tr>
<td>Live performance</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
## Search Results by Source (after application of inclusion and exclusion criteria)

<table>
<thead>
<tr>
<th>Search Method</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Database Searches</strong></td>
<td></td>
</tr>
<tr>
<td>PubMed (1)</td>
<td></td>
</tr>
<tr>
<td>CINAHL (14)</td>
<td></td>
</tr>
<tr>
<td>Web of Science (1)</td>
<td></td>
</tr>
<tr>
<td><strong>Grey Literature Searching</strong></td>
<td>66</td>
</tr>
<tr>
<td>Web: Google (52)</td>
<td></td>
</tr>
<tr>
<td>Web: Google Scholar (14)</td>
<td></td>
</tr>
<tr>
<td><strong>Hand Searching: Journal Table of Contents Searches (11 hits, 4 included)</strong></td>
<td>5</td>
</tr>
<tr>
<td>Health Communication (3)</td>
<td></td>
</tr>
<tr>
<td>Arts &amp; Health: An International Journal for Research, Policy and Practice (1)</td>
<td></td>
</tr>
<tr>
<td>Journal of Applied Arts and Health</td>
<td></td>
</tr>
<tr>
<td>International Journal of Health Communication</td>
<td></td>
</tr>
<tr>
<td>Research and Drama Education</td>
<td></td>
</tr>
<tr>
<td>Applied Theatre Research Journal</td>
<td></td>
</tr>
<tr>
<td>Journal of Arts in Communities</td>
<td></td>
</tr>
<tr>
<td>Journal of Communication and Health Care (1)</td>
<td></td>
</tr>
<tr>
<td>Journal of Applied Theatre and Performance</td>
<td></td>
</tr>
<tr>
<td><strong>Snowballing</strong></td>
<td>1</td>
</tr>
<tr>
<td>American Public Health Association Conference Abstracts</td>
<td>8</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>96</td>
</tr>
</tbody>
</table>
Appendix G: Qualtrics Survey

Introduction

Thank you for participating in this survey.

The survey is a part of a research study being conducted by the University of Florida Center for Arts in Medicine and Ulster University in Northern Ireland. The study is intended to explore the use of the arts in health communication programs, and specifically the relationships between the arts, self-efficacy, and health-related behavior change in the context of health communication programs.

If you choose to participate in this study, you will be asked to complete the following 18-question survey. It will take you approximately 5-10 minutes to complete. There are no known risks to your participation, and your responses will not be shared with others in a way that can identify you. Please note that you may choose to skip questions or discontinue your participation at any time, and you will not be compensated for participation. You will also be asked, but not required, to provide your contact information at the end of the survey.

By beginning this survey, you are granting your informed consent to participate in the study.

Please note that you may contact the principle investigator, Jill Sonke at 352.733.0880 or jsonke@ufl.edu if you have any questions. If you have any concerns about this research, you may also contact the University of Florida Institutional Review Board at 352.392.0433, the Chair of the Faculty of Arts
Research Ethics Filter Committee at Ulster University, Dr. Justin Magee, at jdm.magee@ulster.ac.uk, or the Chief Investigator at Ulster University, Dr. Tom Maguire, at tj.maguire@ulster.ac.uk.

**Part One**

**Part one** of the survey will ask you eight questions about yourself and your work.

It will take approximately 1-3 minutes to complete this section.

Over what period of time have you done work related to health communication (including health education, health literacy, and/or health messaging work)?

- Never
- 1-4 years
- 5-10 years
- 11-15 years
- 16-20 years
- 21-30 years
- More than 30 years

Over the past five years, how often have you been a part of an "arts-based health communication program" (a health communication partnership, program or project that has utilized art forms such as drama, music, visual arts, or performance)?

- Never
- Rarely (1-2 times)
- Sometimes (3-5 times)
- Often (more than 5 times)
Always

In what types of communities in the United States does this work happen? (Please check all that apply)

☐ Urban
☐ Suburban
☐ Rural
☐ Other (please specify)

Please select the box that best describes your primary professional role:

☐ Artist
☐ Public Health Professional
☐ Health Communication Professional
☐ Health educator
☐ Arts educator
☐ Program administrator
☐ Other

With what type of organization are you affiliated: (Please check all that apply)
What is the name of this organization? (please list all that apply)

What are the primary objectives of your arts-based health communication programs? (Please check all that apply)
☐ Health education
☐ Disease prevention
☐ Access to healthcare services
☐ Provision of healthcare services
☐ Health services development
☐ Health advocacy
☐ Community engagement
☐ Social justice
☐ Violence prevention
☐ Community or health needs assessment
☐ Health literacy
☐ Health promotion
☐ Wellness
☐ Other (please specify)

What art forms do you engage in your arts-based health communications programming? (Please check all that apply)

☐ Visual arts
☐ Public art – murals
☐ Public art – other
☐ Music
☐ Live theatre
☐ Television drama
Part Two

Part two of the survey will ask you about your perspectives related to the arts and health communication. There are ten questions, which will take you approximately 3-6 minutes to complete.

Why do you or your organization use the arts in your health communication programs? Please check all that apply.
In your approach to using the arts for health communication, do you distinguish art from entertainment?
What theoretical foundations, frameworks, constructs or models inform your use of the arts for health communication?

In your work, do you see any relationships between the arts, self-efficacy, readiness for behavior change, and behavior change?

What evidence, if any (such as evaluation or research results, participant comments or behaviors, or other outcomes), have you seen in your programs to support associations between the arts, self-efficacy, readiness for behaviour change, and/or behavior change? Please list evidence for each of the associations listed below. Feel free to include links to published documents or websites.

- Evidence of association between the arts and self-efficacy:

- Evidence of association between the arts and readiness for behaviour change:

- Evidence of association between the arts and behaviour change:
What have you learned from using the arts in your health communication program(s)?

Please provide links to webpages, articles, reports or other documents that will provide us with examples of your programs or outcomes related to your work. You may also send materials to jsonke@ufl.edu.

We are interested in learning about other programs that use the arts for health communication. Please list programs that, in your opinion, exemplify best or effective arts-based practices in health communication.

Is there anything else we should have asked you, or that you would like us to know, about your work in using the arts for health communication?
Please provide your contact information below. We may contact you in the future to invite you to participate in a brief interview. We will not share your information or use it in any way for marketing or other purposes.

Name:   
Position Title:   
Organization:   
Organization Address:   
E-mail address:   

Outro

Thank you for taking time to complete this survey!

We will be happy to share the results of this survey with you. If you would like a report, please contact Jill Sonke at jsonke@ufl.edu.
Appendix H: Focus Group Discussion Guide for Artists and Public Health/Health Communication Professionals

Hi, my name is Jill Sonke and, as you know, I am conducting a study on the relationships between aesthetic experience, self-efficacy and behavior change in arts-based health communication programs. Thank you for participating in this focus group. I really appreciate you all taking the time to be here today and I am looking forward to learning from you.

I am going to facilitate our conversation today by asking five questions and also giving you time to add any additional comments you might like. [Name], our research assistant, will be taking notes while we talk and we'll also be audio recording. We'll transcribe our discussion and keep both the recording and the transcript in a secure location. I anticipate that our conversation today will take 75-90 minutes. I am interested in hearing from all of you, so in addition to inviting you each to share your thoughts, I may take the liberty at times of calling on you specifically or asking you to wrap up your comments so we can hear from others. Please be as concise as possible in your answers, but also share everything that you think is relevant to each question and enjoy engaging in an interactive dialogue. And, remember that there are no right or wrong answers. Please feel free to express your opinions and to address one another in the conversation. I’m here to facilitate and hope that you’ll all enjoy talking with one another about the topics that I’ll broach through my questions. You’ll notice on the flipcharts at each end of the room some basic ground rules for the session that will help us have a conversation that is enjoyable and productive.

Before we start, I’ll share with you how I am defining a few of the concepts we’ll talk about. My definitions are just a starting point; you are free to disagree and to share your own definitions. For the purpose of this study, I am defining the arts as various branches of creative activity that involve aesthetic principles or criteria. So, the arts would include performing art forms like dance, music, and theatre, visual art forms such as painting, drawing, and sculpture, and literary art forms such as poetry, prose, and graphic novels. I acknowledge that there is no one definition for art, and want you to be oriented to a broad and inclusion concept here. Arts-based health communication programs are programs that use the arts to facilitate a two-way dialogue with targeted audiences to promote health, health literacy and positive health behaviors. I’ll define other terms as we go along.

And, just another reminder that you may choose to stop participating in the focus group at any time. Do you have any questions about this process before we begin?

Let’s start with introductions. Beginning on this side of the room, could you just say your first name as we go around the room?

Discussion Guide

1. I wonder if a few of you would start us off by sharing a significant success you have experienced in using the arts in a health communication program?
Like art, there is no single definition of aesthetic experience. But, for the purpose of this study and our discussion today, we’ll think of aesthetic experience in relation to the arts and start with the idea that aesthetic experiences feel distinctly different than other experiences. They may include highly focused attention or awareness fully focused on the present moment; they could include a sense of overwhelming beauty, strong emotion or identification with a character, image or idea. But, usually, they have a lingering effect. They stay with you in some way. As we talk, I welcome your definitions or descriptions of aesthetic experience, but let’s get the conversation going again with another question.

2. Do you think that the people who participate in your arts-based health communication programs have aesthetic experiences?
   a. Prompts: If so, how do you know? What does it look like, or what do they say about it? Please share specific instances if you can.

3. Do you intentionally try to facilitate aesthetic experience among participants? If so, how?

Self-efficacy is the belief that one can carry out a behavior necessary to reach a desired goal, even when a situation involves unpredictable and stressful elements. It can be thought of as confidence in one’s ability to successfully perform specific tasks or behaviors.

4. In your arts-based programs, do you observe a connection between aesthetic experience and self-efficacy in your participants?
   a. Prompt: Please explain or provide an example to illustrate your perspective.
   b. Prompt: Is that the same in your sexual and reproductive health and other programs?

5. In your arts-based programs, do you observe a direct connection between self-efficacy when it results from or is heightened by the aesthetic experience, and readiness for behavior change or behavior change?
   a. Prompt: Please explain or provide an example to illustrate your perspective.
   b. Prompt: Have you noticed a difference when people are mandated to participate and when they elective to participate?
   c. Prompt: Is that the same in your sexual and reproductive health and other programs?

6. Finally, is there anything else related to the potential aesthetic experience, self-efficacy and health behavior that you’d like to add?
Appendix I: Focus Group Definitions Handout

DEFINITIONS

Please note that the definitions below were created for the purpose of the current study, with acknowledgement that there is no single definition for these terms, particularly for the arts and aesthetic experience.

The Arts: Various branches of creative activity that involve aesthetic principles or criteria, including performing art forms such as dance, music, and theatre, visual art forms such as painting, drawing, and sculpture, and literary art forms such as poetry, prose, and graphic novels.

Arts-based health communication programs: Programs that use the arts to facilitate a two-way dialogue with targeted audiences to promote health, health literacy and positive health behaviors.

Aesthetic Experience (in relation to the arts): Experiences that feel distinctly different from other experiences. They may include highly focused attention or awareness fully focused on the present moment; they could include a sense of overwhelming beauty, strong emotion or identification with a character, image or idea. But, usually, they have a lingering effect. They stay with you in some way.

Self-efficacy: The belief that one can carry out a behavior necessary to reach a desired goal, even when a situation involves unpredictable and stressful elements. It can be thought of as confidence in one’s ability to successfully perform specific tasks or behaviors.
Appendix J: Context-Mechanism-Outcome Codebook

CONTEXT: Arts-based health communication program
MECHANISM: Aesthetic experience
OUTCOME: Self-efficacy or/and behaviour change (including intent for behaviour change)

Definitions:

Health Communication: The transfer of information from experts in the medical and public health fields to patients and the public. The study and use of communication strategies to inform and influence individual and community decisions that enhance health (US National Library of Medicine, 2018).

Arts-based health communication programs: Programs that use the arts to facilitate a two-way dialogue with targeted audiences to promote health, health literacy and positive health behaviors (Sonke, et al., 2018).

Aesthetic Experience (in relation to the arts): Experiences that feel distinctly different from other experiences. They may include highly focused attention or awareness fully focused on the present moment; they could include a sense of overwhelming beauty, strong emotion or identification with a character, image or idea. But, usually, they have a lingering effect. They stay with you in some way (Carroll, 2002; Dewey, 2005; Nanay, 2018).

Self-efficacy: The belief that one can carry out a behavior necessary to reach a desired goal, even when a situation involves unpredictable and stressful elements. It can be thought of as confidence in one’s ability to successfully perform specific tasks or behaviors, or the belief that one can exercise control over one’s health habits (Bandura, 2004).

Intent for Behaviour Change: The stage of behavior change at which people intend to take an action or change a behavior or habit pattern in the immediate future (Prochaska & Velicer, 1997).

Behavior change: A change in a person’s health-related habits or behaviors; these changes are usually intended to prevent disease or enhance health/wellbeing (Strecher, McEvoy DeVellis, Becker & Rosenstock, 1986).

Codes:

CMO1: Outcome - Self-efficacy; a statement, story or assertion based on experience that includes reference to self-efficacy on the part of a program participant (ABHCP + AE + SE).

CMO2: Outcome - Intent for behavior change; a statement, story or assertion based on experience that includes reference to intent for behavior change on the part of a program participant (ABHCP + AE + IBC).
CMO3: Outcome - Behavior change; a statement, story or assertion based on experience that includes reference to behavior change on the part of a program participant (ABHCP + AE + BC).

CMO4: Outcome – Self-efficacy and intent for behaviour change; a statement, story or assertion based on experience that includes reference to both self-efficacy and intent for behavior change on the part of a program participant (ABHCP + AE + SE+IBC).

CMO5: Outcome – Self-efficacy and behaviour change; a statement, story or assertion based on experience that includes reference to both self-efficacy and behavior change on the part of a program participant (ABHCP + AE + SE+BC).

Inclusion and Exclusion:

<table>
<thead>
<tr>
<th>Code</th>
<th>Definition</th>
<th>Includes</th>
<th>Excludes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMO1</td>
<td>Outcome - Self-efficacy; a statement, story or assertion based on experience that includes reference to self-efficacy on the part of a program participant (ABHCP + AE + SE).</td>
<td>Self-efficacy, empowerment, confidence, belief in self, belief in one’s ability to change behavior or undertake specific behaviour</td>
<td>Development of knowledge or skills, happiness, enjoyment, conceptual linking of AE+SE</td>
</tr>
<tr>
<td>CMO2</td>
<td>Outcome - Intent for behavior change; a statement, story or assertion based on experience that includes reference to intent for behavior change on the part of a program participant (ABHCP + AE + IBC).</td>
<td>Specific references to behaviour</td>
<td>Self-efficacy, empowerment, confidence, belief in self, belief in one’s ability to change behavior or undertake specific behavior, conceptual linking of AE+IBC</td>
</tr>
<tr>
<td>CMO3</td>
<td>Outcome - Behavior change; a statement, story or assertion based on experience that includes reference to behavior change on the part of a program participant (ABHCP + AE + BC).</td>
<td>Specific health behaviour change, action taken on behalf of self, action taken on behalf of other</td>
<td>Intent for behavior change, readiness for behavior change, contemplation of behaviour change; conceptual linking of AE+BC</td>
</tr>
<tr>
<td>CMO4</td>
<td>Outcome – Self-efficacy and intent for behaviour change; a statement, story or assertion based on experience that includes reference to both self-efficacy and intent for behavior change on the part of a program participant (ABHCP + AE + SE+IBC).</td>
<td>Description that includes both self-efficacy and intent for behaviour change in the same scenario</td>
<td>Descriptions that include only self-efficacy or intent for behaviour change, or descriptions that include self-efficacy, intent for behaviour change, and behavior change, conceptual</td>
</tr>
</tbody>
</table>
**Examples:**

**CMO1:** Outcome - Self-efficacy (ABHCP + AE + SE)

“It was just fascinating to watch her go from feeling really consumed by this experience and story to then feeling empowered by it.”

“And I think these types of workshops can really be helpful for that in giving them confidence that they can cook for themselves and live in that healthy lifestyle.”

**CMO2:** Outcome - Intent for behavior change (ABHCP + AE + IBC)

“[The program] made me want to go out and help others and bring awareness to other people about what is happening.”

“[A program] we call the Sex Squad Program... It's the one where the college students are performing for the fifteen-year-olds. There's a part where an HIV positive person tells their personal story and then the fourth part is integrative art making... And so, when we asked about their intent to be tested for HIV, we went up by, I'm going to say a number but I can't remember it exactly now, but it was by four times.”

**CMO3:** Outcome - Behavior change (ABHCP + AE + BC)

“We received a message from a fan on Facebook – she said she was standing in line right now to vote because of the show. Even though that is a single story, that really hit us in terms of the impact the show can have. That it encouraged even that one person to vote, that was a big success to us.”

“We have actual research to show that people have taken action for themselves and their communities as a result of the show. We’ve had people reach out to us for help – the show gave me courage to speak up about their own abuse. Because of seeing Camila’s storyline- as a direct result of the show she reached out for resources for help.”

**CMO4:** Outcome – Self-efficacy and intent for behaviour change (ABHCP + AE + SE+IBC)
[The show] changed the way I approach the subject... before the show, I would have been like my mom and ignored it, but now seeing how it’s affected me – it’s made me rethink how I want to approach talking about it, regardless of how awkward.

**CMO5:** Outcome – Self-efficacy and behaviour change (ABHCP + AE + SE+BC)  
“[The show] definitely gave me more confidence, I wouldn’t have talked to my parents otherwise.”

“I had a moment with my teen girls where a girl walked in, ‘Well, I’m making out with a boy last night and he asked for my consent and this is how this went down...’ Right? And all the girls were all excited, but it was all the stuff that we had been, like, playing with, practising, and exploring.”
References


### Appendix K: Working Definitions of Terms Used in the Conceptual Model

<table>
<thead>
<tr>
<th>Term</th>
<th>Definitions for this Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>The arts</td>
<td>Note: this study did not attempt to define art, nor did it rely on one definition. In this model, the term “the arts” refers to various and inclusive forms of music, visual arts, dance, drama, literary arts, digital arts, interdisciplinary arts, and other forms of expression that may be commonly referred to as forms of art across cultures.</td>
</tr>
<tr>
<td>Compelling</td>
<td>Something that arouses, captures, holds attention, and is intentionally unordinary (Dissanayake, 2003)</td>
</tr>
<tr>
<td>Artistry</td>
<td>The element of an artwork or the consummate skillset of the artist that has the potential to reveal meaning, to surprise, and to delight (Hoover et al., 2021)</td>
</tr>
<tr>
<td>Embodiment</td>
<td>Engagement of the physical body and its place in the environment in concert with cognition (Marshall, 2014)</td>
</tr>
<tr>
<td>Resonance</td>
<td>Heightened emotional and creative response to either alignment with or challenge to one’s cultural worldview in relation to an idea or artifact (McDonnell et al., 2017; Robnett, 2004)</td>
</tr>
<tr>
<td>Aesthetic experience</td>
<td>Experiences that engage “critical attention and interest”, beyond pleasure alone (Dowling, 2010, p. 229), that are to some degree transcendent, and that linger in both the senses and the memory (McClelland, 2005), as distinct from other moments in everyday life.</td>
</tr>
<tr>
<td>Emotional engagement</td>
<td>Involvement of emotion or emotional responses to artworks or activities; emotional connection with ideas, characters or other program participants (Van Leeuwen et al., 2017)</td>
</tr>
<tr>
<td>Dialogue</td>
<td>Two-way discourse or exchange of ideas</td>
</tr>
<tr>
<td>Skills development</td>
<td>The development of new skills (abilities that stem from knowledge, practice or aptitude) or advancement of existing skills, related to health behaviours (Bandura, 1994)</td>
</tr>
<tr>
<td>Confidence</td>
<td>Belief in one’s self, and one’s powers and abilities (dictionary.com)</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>An individual's belief in his or her capacity to execute behaviors necessary to produce specific performance attainments (Bandura, 1977)</td>
</tr>
<tr>
<td>Internal &amp; external factors</td>
<td>Factors specific to one’s personal and social contexts, including self-appraisal, past experiences, and physical, social and political environments (Bandura, 2012)</td>
</tr>
<tr>
<td>Behaviour change</td>
<td>Changes in health-related behaviours (Bandura, 1977)</td>
</tr>
<tr>
<td>Facilitators and barriers</td>
<td>Factors that enhance or limit possibilities for aesthetic experience, self-efficacy or behaviour change (Bandura, 2012)</td>
</tr>
</tbody>
</table>