Healthy Arts?
Exploring the relationship between arts engagement and population health

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BA(Hons), GradDipPublHlth, MPH

This thesis is presented for the degree of Doctor of Philosophy
at The University of Western Australia

School of Population Health, Faculty of Medicine, Dentistry and Health Science & School of Sport Science
Exercise and Health, Faculty of Science
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STATEMENT OF CONTRIBUTION

This thesis is presented for the degree of Doctor of Philosophy at The University of Western Australia and is a ‘thesis by publications’. The candidate, under the guidance of her principal and co-ordinating supervisor Winthrop Professor Matthew Knuiman and co-supervisor Associate Professor Michael Rosenberg, was responsible for writing this thesis. Under supervision, the candidate developed: (1) an online survey of international experts to develop a definition of arts engagement for population-based research, and (2) an interview guide to establish a general population health-arts framework. The candidate collected the data for the online surveys and interviews. The candidate also developed (3) the ‘Healthy arts telephone survey’ to quantify the impact of arts engagement on mental wellbeing. This survey was administered by telephone interviewers at the Edith Cowan University Survey Research Centre. Permission was also granted by the Western Australian Health Promotion Foundation (Healthway) to utilize data collected as part of their survey of ‘Community Recreation & Health’ and ‘Sponsorship Monitor’ to assess the viability of the arts as a health promotion setting. The candidate was responsible for all qualitative and quantitative data cleaning, coding, management and analysis. She was the lead author on all five peer-reviewed publications included in the thesis, for which her contribution was in excess of 80%.

The candidate was supported by a Healthway Research Training Scholarship and an Australian Postgraduate Award. Funding for the research was provided via a Healthway Research Starter Grant. Grant details:

Title: Arts Engagement and Health - Determining the Outcomes (2009-11)
Grant number: 18918
Chief Investigator: Christina Davies
Amount funded: $29,963

Signed:

C. R. Davies (Candidate)

W/Prof M. Knuiman (Principal Supervisor)
Title: Inspiration

Mixed media on canvas (90cm x 180cm)
This painting was created by the candidate during the course of the PhD
INTRODUCTION:
To expand the Arts and Health knowledge base, health outcomes must be scientifically demonstrated, definitions elucidated, a conceptual framework explicated, the health-arts relationship quantified and the viability of the arts as a health promotion setting verified. This PhD contributed to each of these objectives by investigating two themes: ‘Arts for Health’ (i.e. the idea that arts engagement can promote, maintain and improve health), and ‘Health in Arts’ (i.e. health sponsorship of arts organisations to promote wellbeing). The focus of this PhD was on the general population (rather than clinical populations or specific target groups), and on the art people do as part of their everyday lives for enjoyment, entertainment or as a hobby (rather than therapy or art programs).

METHODS:
A mixed-methods approach utilising qualitative and quantitative techniques was employed. Data were analysed via NVivo, SPSS and/or SAS for Windows. To define arts engagement for population based research, the study commenced with two online surveys of international experts (survey 1, n=280, response rate= 44%; survey 2, n=100, response rate= 57%). The data were analysed using thematic, descriptive and factor analyses. Next, to develop a health-arts framework, interviews with members of the Western Australian general population were conducted (n=33). Interviews were analysed thematically. The arts engagement definition and health-arts framework subsequently facilitated the development of the ‘Healthy arts telephone survey’. This cross-sectional survey provided a detailed measure of population based arts engagement (n=702, response rate=71%). Via descriptive and regression analyses, the relationship between arts engagement (hours per year) and mental wellbeing (assessed via the Warwick-Edinburg Mental Wellbeing Scale) was quantified. Finally, to assess the viability of the arts as a health setting, secondary analyses of Healthway’s ‘Community Recreation & Health’ (n=1997, response rate = 59%) and ‘Sponsorship Monitor’ (592 arts and 420 sports respondents) data were conducted.

FINDINGS:
The findings of this PhD are described via a series of five thesis chapters and correspond to five peer-reviewed papers (four published, one under review). In
Chapter 4, arts engagement was defined as ‘active’ or ‘passive’ involvement in creative events or activities within five art forms (1. performing arts; 2. visual arts, design and craft; 3. community/cultural festivals, fairs and events; 4. literature; and 5. online, digital and electronic arts) and measured via 91 activities. ‘Active’ arts activities had higher levels/ratings of engagement than ‘passive’ activities. The health-arts framework developed in Chapter 5 (Arts for Health) contained seven outcome themes. Three themes related to health (mental, social and physical), while economic, knowledge, art and identity outcomes were classified as health determinants. Within each theme, positive, negative and unintended outcomes were identified and related to the individual and/or the community. Confounding and/or effect modifying factors were also listed. In Chapter 6 (Arts for Health) the relationship between arts engagement and mental wellbeing was quantified. After adjustment for demographics, general health, holidays, sports participation and religious engagement, respondents with high arts engagement (100+ hours/year) had significantly better mental wellbeing than those with none, low and medium levels of engagement (p=0.003). Chapter 7 (Health in Arts) evaluated the effectiveness of health sponsorship of arts events at a population level. Overall, those engaged in the arts were significantly more likely to recall physical activity, sun protection, nutrition, safe alcohol consumption and anti-smoking messages than those not engaged in the arts (adjusted ORs: 1.9 to 1.3). Finally, Chapter 8 (Health in Arts) provided a direct comparison of arts versus sports setting to promote anti-smoking messages. After adjustment for demographics, smoking status and clustering, arts events were as effective in promoting message awareness, comprehension, acceptance, and twice as effective on intention to act compared to sports events (p=0.03).

CONCLUSION:
A better understanding of the health-arts relationship is of value to members of the general public, clinicians, health/social care professionals, researchers, policy makers and funding organisations. Findings are also important to artists and arts organisations to inform policy and practice. This PhD contributes to scholarship via the development of a definition of arts engagement and framework for understanding the arts engagement and health relationship. This is a step towards the conceptualisation of a causal health-arts theory. Study findings provide guidance about which art forms and activities to include in population surveys, as well as a quantification method and
measure of exposure for investigating the health-arts dose-response relationship. **Arts for Health:** The arts were found to impact health and health determinants. In particular, the relationship between 100+ hours/year (or 2+ hours/week) of arts engagement and good mental wellbeing has many public health implications (e.g. policy, programs, health messages). The ability of the arts to promote, maintain and improve population health requires further investigation. **Health in Arts:** This study provided evidence of the effectiveness of health-arts sponsorship to promote wellbeing to the general population. The effectiveness of the arts as a health promotion setting also requires further investigation.
Title: Nascer do sol (Sunrise as stained glass)

Acrylic on canvas (40cm x 70cm)
This painting was created by the candidate during the course of the PhD
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<td>Davies C et al (2012). Defining arts engagement for population-based health research: Art forms, activities and level of engagement. Arts &amp; Health 4(3): 203-216.</td>
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Title: Tribute to Prendergast

Acrylic on canvas (30cm x 40cm)
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<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>ABS</td>
<td>Australian Bureau of Statistics</td>
</tr>
<tr>
<td>ANOVA</td>
<td>Analysis of Variance</td>
</tr>
<tr>
<td>CI</td>
<td>Confidence Interval</td>
</tr>
<tr>
<td>Healthway</td>
<td>Western Australian Health Promotion Foundation</td>
</tr>
<tr>
<td>n</td>
<td>Sample size, number</td>
</tr>
<tr>
<td>NEA</td>
<td>National Endowment for the Arts</td>
</tr>
<tr>
<td>N.B.</td>
<td>Note</td>
</tr>
<tr>
<td>NVivo</td>
<td>QSR NVivo qualitative data analysis computer software package</td>
</tr>
<tr>
<td>OR</td>
<td>Odds Ratio</td>
</tr>
<tr>
<td>p</td>
<td>p-value</td>
</tr>
<tr>
<td>SAS</td>
<td>Statistical Analysis System software package for Windows</td>
</tr>
<tr>
<td>SPSS</td>
<td>IBM Statistical Package for the Social Sciences</td>
</tr>
<tr>
<td>SD</td>
<td>Standard deviation</td>
</tr>
<tr>
<td>WEMWBS</td>
<td>Warwick-Edinburgh Mental Wellbeing Scale</td>
</tr>
<tr>
<td>UK</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>US</td>
<td>United States of America</td>
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<tr>
<td>UWA</td>
<td>The University of Western Australia</td>
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<tr>
<td>WA</td>
<td>Western Australia</td>
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</tbody>
</table>
This thesis is dedicated to Maya Davies (18 Sept 2012 – 23 Sept 2012) - the angel by my side that makes the impossible possible

It has been my great privilege to undertake a PhD with W/Prof Matthew Knuiman. Thank you for your brilliance, encouragement, support and attention to detail. I greatly appreciate the generosity with which you have shared your time, knowledge and provided guidance not only about my PhD but also about my future research career. My PhD has been a fantastic and rewarding experience thanks to you.

Heartfelt thanks also goes to my co-supervisor A/Prof Michael Rosenberg. I am grateful for your time, expertise and for encouraging me to undertake an ‘Arts and Health’ PhD. Thank you also for helping me obtain a starter grant to fund this research and for always finding the right words to motivate 110% effort.

I am indebted to my ‘unofficial supervisors’ and mentors Prof Liz Geelhoed, A/Prof Tom Briffa, Dr Terri Pikora and A/Prof Peter Wright. Thank you also to Dr Audrey Fernandes-Satar, Dr Gina Trapp, Lindsay Lovering, Mike White and Margaret Meagher. I greatly value your thoughtfulness, goodwill and the generosity with which you have shared your wisdom and experience. I feel very fortunate to have had your guidance and support in relation to my research.

Acknowledgement is also owed to the reviewers of my PhD papers (Chapters 4-8). Thank you for your time and suggestions. Your comments were very helpful and enhanced my research.

A big thank you must also be said to my friends Darcy Bosch and Renee Ferguson for helping me to collect my data and to Dr Melanie Pescud for proof reading my thesis (the sign of a true friend indeed!) and house/dog sitting while I gallivanted around Italy presenting my PhD. Thank you also to my PhD room buddies Ping Liu, Mila Dirgawati and Jia-Li Feng – it has been my privilege to share a room which such wonderful, fabulous and hilarious people. Thank you for teaching me Chinese – 加油(Jia You!) –
and for your fashion tips (although I fear the fashion tips may have been wasted as my favourite clothes are still blue jeans and ugg boots). Special thanks also to Ping for suggesting I add my artworks to this thesis.

The research funding and scholarship assistance provided via a Healthway Research Starter Grant, Healthway Research Training Scholarship, Australian Postgraduate Award, UWA top-up scholarship, UWA travel award and Population Health Postgraduate Student travel award is gratefully acknowledged.

The professional work of Vicki Graham and her team at the ECU Survey Research Centre should also be recognised – working with you to conduct the Healthy Arts telephone survey was a pleasure!

A big thank you also goes to Dr Sally-Ann Jones and Simone Hewett from the UWA Public Affairs Unit. Your support in how to write a media release, tips on working with the media (including what to say and what to wear) and the promotion of this research internationally has been legendary.

I apologise to and thank anyone I may have forgotten.

The support of my family made my PhD possible. Especially Vani (the best 'big sister' anyone could hope for), Lena, Jazzy and Dad. Thank you for your love, care, encouragement, support, advice, phone calls, lunches, dinners and cups of tea.

Last but definitely not least, I would like to thank my wonderful husband Tim. Thank you for your patience, good humour, hugs, praise, support and calmness. Thank you for proof reading my thesis and for all those times you have cooked breakfast and dinner knowing that I’m so wrapped up in my Arts and Health PhD that I haven’t noticed its time stop work. I love you, appreciate you and I’m looking forward to gardening, playing board games, going on holiday, cooking and watching movies/TV with you again.
Title: Australian Sunset

Acrylic on canvas (60cm x 90cm)
This painting was created by the candidate during the course of the PhD
Chapter 1

Introduction
Chapter 1: INTRODUCTION

1.1 RESEARCH CONTEXT & RATIONALE

In recent years the arts have received increasing attention from researchers as a means of improving wellbeing.[1-4] While it might seem intuitively reasonable that the arts are capable of influencing population health, robust, evidence-based research is limited.[5-7] Most health-arts studies have focused on clinical populations or specific target groups rather than the general population. The literature is also skewed towards therapy and specific arts programs, rather than the art people do as part of their everyday life (for enjoyment, entertainment or as a hobby). For the field to move beyond anecdote and opinion,[6] general population outcomes need to be scientifically demonstrated, definitions elucidated and a conceptual framework explicated. In addition, the health-arts relationship requires quantification and the viability of the arts as a health promotion setting verified. This ‘thesis by publications’ comprises a series of interlinked studies contributing to these broad objectives by investigating two themes: ‘Arts for Health’ (i.e. the idea that arts engagement can promote, maintain and improve health), and ‘Health in Arts’ (i.e. health sponsorship of arts organisations to promote wellbeing). This PhD sits within the fields of Population Health, the Arts and ‘Arts and Health’ and has direct implications for research. A better understanding of the relationship between health and the arts is also of value to clinicians, health/social care professionals, members of the general public, artists, arts organisations and funding organisations (e.g. government, non-government, philanthropic) to inform policy and practice.

1.2 RESEARCH AIMS AND OBJECTIVES

The overall aim of this PhD was to explore the relationship between arts engagement and general population health. The specific objectives were to:

- Develop a definition of arts engagement suitable for use in population based research.
- Develop a conceptual framework of the relationship between arts engagement and health (Arts for Health).
• Measure the prevalence of arts engagement in the general population and quantify the relationship between arts engagement and mental wellbeing (Arts for Health).
• Assess the effectiveness of the arts as a setting to promote health messages to the general population (Health in Arts).

1.3 STRUCTURE OF THE THESIS
This thesis is comprised of nine chapters and focuses on two research themes, Arts for Health and Health in Arts. Chapter 2 provides a background to this research and summarises previous work in this field. Chapter 3 describes the data sources and presents an overview of the research methods. As this is a thesis by publications, the five chapters that follow are presented as manuscripts (four published in peer-reviewed journals, one under review). The first manuscript defines arts engagement for population based research (Chapter 4). The second manuscript presents a health-arts conceptual framework for guiding research and practice (Arts for Health, Chapter 5). The third manuscript measures the prevalence of arts engagement and then quantifies the relationship between arts engagement and mental wellbeing in the general population (Arts for Health, Chapter 6). The fourth and fifth manuscripts assess the effectiveness and viability of the arts as a health promotion setting (i.e. Health in Arts, Chapter 7 and 8). Finally, Chapter 9 summarises the main findings of this research including the implications for policy, practice and research.

1.4 PUBLICATIONS & PRESENTATIONS
As noted above, this is a thesis by publications. The candidate was the lead author on all papers for which her contribution was in excess of 80%. The papers are listed below:

PAPERS
2. Davies C, Knuiman M, Wright P & Rosenberg M (2014). The art of being healthy: a qualitative study to develop a thematic framework for understanding

3. **Davies C**, Knuiman M & Rosenberg M (2014, under review). The art of being mentally healthy: A cross-sectional study of the relationship between hours engaged in the arts and mental wellbeing in the general population. (Chapter 6)


In addition to journal articles, the research was presented at a number of international, national and local conferences. The candidate was the lead author/presenter on all six oral and two posters presentations (below).

**PRESENTATIONS & POSTERS**


### 1.5 AWARDS & RECOGNITION

During the course of this PhD the candidate received the following awards and recognition for work contained within this thesis:

**AWARDS**


2. **Matilda Award for Cultural Excellence**. Awarded by The University of Western Australia, 2013.

3. **Consumer and Community Advisory Council Award**. Awarded by The University of Western Australia, 2013.

4. **People’s Choice Award - Best Presentation**. 2013 Brightwater Population Health Postgraduate Society Research Symposium. Awarded by Musica Viva Australia & The University of Western Australia.

5. **Best Oral Presentation**. 2013 Brightwater Population Health Postgraduate Society Research Symposium. Awarded by The University of Western Australia.

**RECOGNITION**

6. The BMJopen paper titled ‘The art of being healthy: a qualitative study to develop a thematic framework for understanding the relationship between health and the arts’ (Chapter 5) is currently in the *top 1% of articles by*
**1.6 MEDIA & COMMUNITY AWARENESS**

During the course of this research, three media statements related to this thesis were written by the PhD candidate (under guidance from her supervisors) and released via the public affairs department of The University of Western Australia. The aim was to inform the local, national and international community of findings from this research. The titles of the media releases were:


The three releases above, resulted in local, national and international media in the form of newspaper articles, e-articles, radio interviews, magazine articles, tweets (via twitter) and features items (below). The media releases, articles and features are presented in Appendix A.

**NEWSPAPER ARTICLES (n=12)**

- *Getting arty is good for you.* Weekend West, 13 Sept 2014 (Local media, circulation: 333,768 weekly).
- *Arts good for health – Study.* Western Independent, 1 June 2014 (Local media, circulation: unknown).
- *Arts can put a skip in your step.* Pilbara News, 21 May 2014 (Local media, circulation: unknown).
- *Positive moves.* West Australian, 16 May 2014 (Local media, circulation: 166,468 daily).
• *Happy beat.* My Weekly Preview, 16 May 2014 (Local media, circulation: 62,500 weekly).

• *Health happy beat.* Dubbo Photo News, 8 May 2014 (Local media, circulation: 12,000 weekly).

• *Participation in the arts a de-stressor.* North West Star, 9 May 2014 (Local media, circulation: 2375 daily)

• *Arts a health boost.* Kalgoorlie Miner, 5 May 2014 (Local media, circulation: 4677 daily).

• *Artistic activities give you happy vibe.* Western Advocate, 3 May 2014 (Local media, circulation: 3212 daily).


• *Arts contribution to health.* National Business Review, 18 October 2013 (International media, circulation 90,000 weekly).

• *If music be the food of love, play on.* The Australian, Higher Education, 3 October 2013 (National media, circulation 436,000 daily).

**E-ARTICLES (n=6)**


RADIO INTERVIEWS (n=3)

- Arts Beat, RTR FM, WA - Justine Dandy, 10am, 4 October 2013.
- ABC Bunbury, South West Radio, WA - Ron Tait, September 2010.

MAGAZINE ARTICLES (n=2)

- The art of being healthy. Uniview, 2014. (Circulation 65,000 half-yearly, all UWA graduates globally, all secondary schools and libraries in Western Australia).

TWITTER (n=110,417 followers)

- BMJ open tweets – ‘The art of being healthy’ (97,358 followers).
- The art of good health #uwa Ez.com/xu3m (4983 followers).
- Arts beat sport for healthier living #uwa Ez.com/a8pd (4076 followers).
- Is #art at the heart of #health? #uwa Ez.com/2chu (4000 followers).

FEATURES

- Public Health Advocacy Institute of Western Australia Member News, 7 May 2014 (n=785 members).
- The University of Western Australia website (Front page), 30 April – 4 May 2014.
Title: Aurora

Acrylic on canvas (60cm x 90cm)
This painting was created by the candidate during the course of the PhD
Chapter 2

Background
Chapter 2: BACKGROUND

2.0 INTRODUCTION
This chapter describes the context and rationale for this PhD. The chapter summarises and reviews previous health-arts literature so as to provide a background to the individual studies conducted for this PhD. As this is a thesis by publications, Chapters 4 to 8 are presented as manuscripts (four published papers, one under review). Each of these chapters/manuscripts also contains a review of literature as it appears in the related journal on the date of publication (or submission for Chapter 6).

The first section of this chapter provides an introduction to ‘the Arts’ and the field of ‘Arts and Health’ with regard to the general population. The second section discusses the need for a definition of arts engagement for population based research. As this PhD is split into two themes, the third section discusses the concept of Arts for Health and the fourth section the concept of Health in Arts.

2.1 THE ARTS, THE FIELD OF ‘ARTS & HEALTH’ AND THE GENERAL POPULATION

2.1.1 The arts and the general population
Members of the general population engage in the arts as part of their everyday life, for enjoyment, entertainment, or as a hobby.[8] Activities include listening to music, reading novels, painting, drawing, photography, playing a musical instrument, dancing, singing, creative writing and attending arts events like music concerts, festivals and plays. Overall, the arts are a popular pastime with 86% (15 million people) of Australian adults aged 15+ years attending at least one cultural event/venue in 2009-10.[9] The most popular method of engagement among Australian adults was attending the cinema (67%, 11.7 million people).[9]

Inter-country comparisons are common in the public health literature and often used for benchmarking and assessment purposes. Currently, inter-country comparisons of arts engagement are difficult due to inconsistencies in the types of events/activities
surveyed, variations in reference periods (e.g. participation in the last 12 months versus the last two weeks), disparities in the eligible sample surveyed (e.g. age range) and methodological differences (e.g. survey wording and mode of delivery). With this in mind, Table 2.1 presents a summary of published reports and is a general indicator of engagement to inform this research. Table 2.1 summaries reported levels of engagement, by members of the general population, for a variety of countries/continents, in the last five years. That is, reports published between 2010 and 2014. For each country/continent, Table 2.1 specifies:

- the estimated population prevalence of arts engagement;
- the survey name, eligible sample and arts engagement definition;
- (using the 2009-10 ABS survey for comparison)[9] the types of events/activities reported.

Globally, arts engagement by members of the general population was high and varied between 78% and 100%. For most types of activities/events, females compared to males and younger compared to older people were more likely to engage in the arts.[9-13] According to the literature, involvement in the arts by members of the general population is influenced by:

- background factors (e.g. education),
- practical constraints (e.g. time, cost, location, knowledge),
- personality and attitudinal factors (e.g. positive/negative arts experience, interest, intentions, feelings of adequacy/inadequacy), and
- exposure to the arts as a child via an arts mentor (e.g. parent, teacher).[14-16]
<table>
<thead>
<tr>
<th>Country/Continent and data collection period (in alphabetical order)</th>
<th>Estimated Population Prevalence</th>
<th>Survey name, eligible sample and arts engagement definition</th>
<th>Arts events/activities*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Australia 2009-10 [9]</strong></td>
<td>86%</td>
<td><em>2009-10 Multipurpose household survey (Australian Bureau of Statistics)</em> Adults aged 15+ years who attended at least one cultural event or venue in the previous 12 months</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td><strong>Australia 2013 [17]</strong></td>
<td>95%</td>
<td><em>Arts in daily life: Australian participation in the arts (Australia Council for the Arts)</em> Adults aged 15+ years who creatively or receptively participated in at least one art form in the year before the survey</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td><strong>Canada 2010 [18]</strong></td>
<td>99.7%</td>
<td><em>Canadians’ arts, culture and heritage activities in 2010</em> Adults aged 15+ years who attended and participated in a selection of arts activities in the previous 12 months</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td><strong>Europe 2006-7 [19]</strong></td>
<td>Overall prevalence not reported; Attendance=45%</td>
<td><em>European Union statistics on income and living conditions 2006; Adult education survey 2007; Community survey on information and communication technologies; Media sales</em> Selected questions from the above surveys for adults aged 25-64 over the previous 12 months</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td>Country/Continent and data collection period (in alphabetical order)</td>
<td>Estimated Population Prevalence</td>
<td>Survey name, eligible sample and arts engagement definition</td>
<td>Arts events/activities*</td>
</tr>
<tr>
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<td>---</td>
</tr>
<tr>
<td>France 2010 [20]</td>
<td>Overall prevalence not reported</td>
<td>27 sources, eligible sample and specific questions not specified</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td>Japan 2011 [21]</td>
<td>Overall prevalence not reported</td>
<td>Survey on time use and leisure activities Respondents aged 10+ years engaged in leisure activities (including arts activities) over the year</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td>New Zealand 2011 [12]</td>
<td>85%</td>
<td>New Zealanders and the arts New Zealanders aged 15+ years who engaged in the arts either by attending or being actively involved in the past 12 months</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td>Norway 2012 [10]</td>
<td>Overall prevalence not reported</td>
<td>Norwegian cultural barometer 2012 Norwegians aged of 9-79 years use of media and culture</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td>Singapore 2011 [22]</td>
<td>Overall prevalence not reported; Attendance=48%, Participation=19%</td>
<td>2011 National population survey on the arts Adults aged 15+ years who attended and participated in at least one arts and cultural activity in the previous 12 months</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td>Country/Continent and data collection period (in alphabetical order)</td>
<td>Estimated Population Prevalence</td>
<td>Survey name, eligible sample and arts engagement definition</td>
<td>Arts events/activities*</td>
</tr>
<tr>
<td>---</td>
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<td>---</td>
<td>---</td>
</tr>
<tr>
<td>United Kingdom 2012 [23]</td>
<td>78%</td>
<td>Taking part survey Adults aged 16+ years who attended (13 items) or participated (16 items) in a list of specific activities in the previous year</td>
<td>Art gallery Archive Botanic gardens Cinema Dance performance Library Museums Music concerts Musik, operas Theatre performance Zoological parks and aquariums Other*</td>
</tr>
<tr>
<td>Northern Ireland 2012 [11]</td>
<td>Overall prevalence not reported; Attendance=82%, Participation =30%</td>
<td>2012 General population survey Adults aged 16+ years who attended and participated in a selection of arts activities in the previous 12 months</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td>Scotland 2011 [13]</td>
<td>87%</td>
<td>Scottish household survey 2011 Adults aged 16+ years who attended a cultural event/place, and participating in cultural activity in the last 12 months</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td>United States 2012 [24]</td>
<td>Overall prevalence not reported</td>
<td>Survey of public participation in the arts Adults aged 16+ years engagement in 5 areas in the previous 12 months: Arts Attendance, Reading Literary Works, Arts Consumption through Electronic Media, Arts Creation and Performance, Arts Learning</td>
<td>✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
</tbody>
</table>

*Comparison of the Australian Bureau of Statistics 2009-10 Multipurpose Household Survey[9] arts events/activities to the definition used by other organisations globally.
2.1.2 The field of ‘Arts and Health’ and the general population

The use of the arts in health has a lengthy history. For example, art was used in British hospitals during the middle ages to enhance the hospital environment.[25] The field of ‘Arts and Health’ has also been referred to as ‘arts in health’, ‘arts into health’, ‘healing arts’ and arts/health.[26] Compared with other disciplines, the field of Arts and Health is in its infancy, only emerged as a discipline in the mid-1980s with supporting evidence mounting since the 1990s.[27]

The field of Arts and Health is diverse. As a result, a number of researchers have attempted to define the field of practice. As shown in Table 2.2, distinct areas have been suggested including the built environment, art in hospitals, the medical humanities, art therapy, community arts and arts in healthcare settings.

Table 2.2: Arts and health areas

<table>
<thead>
<tr>
<th>Author</th>
<th>Date</th>
<th>Built environment</th>
<th>Art in hospitals</th>
<th>Medical humanities</th>
<th>Art therapy</th>
<th>Community arts</th>
<th>Arts in healthcare settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meyrick</td>
<td>2001</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Dose</td>
<td>2006</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Doyle</td>
<td>2008</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

To date, the focus of the field has been on:

- **Improving health, healing and treatment** via therapy and specific clinical or community programs.[27] The importance of prevention, health maintenance and the art people do as part of their everyday lives has had less of a focus.

- **Small numbers of participants, specific target groups and clinical populations** rather than the general population. As shown in Table 2.1, where studies have been conducted at a population level, research definitions and methods are often inconsistent and vary considerably by the types of activities used to identify people as engaged or not engaged in the arts.[31]

- **Ensuring that the art produced is of a high-quality.** Many in the field of Arts and Health highlight the importance of producing ‘quality’ art.[28] Few
however consider the implications and importance of art ‘quantity’ and the effect of the arts as a pastime, for enjoyment, entertainment or as a hobby.

- **Art programs in medical and community setting.** The reverse, of bringing health to an art setting has largely been ignored (e.g. the promotion of health messages at arts events).

### 2.2 DEFINING ARTS ENGAGEMENT

A scientific approach to research is needed to progress the health-arts debate beyond anecdote and opinion.[6] An important part of this scientific approach is to elucidate key terminology and concepts as consistent definitions, classifications and frameworks will facilitate the health-arts dialogue.[27, 32]

As highlighted by Table 2.1, the field of *Arts and Health* is currently limited by inconsistent definitions of arts engagement.[31] Although it is acknowledged that the arts are continuously evolving, what the *Arts and Health* field needs is an approach that treats arts engagement as a list of activities, including its most problematic and debated outliers (e.g. watching television).[33] For reasons of validity and reliability research questions about arts engagement need to be comprehensive, precise and consistent so as to adequately measure involvement. From a population perspective, the prevalence of arts engagement needs to be measured via a well-defined list of arts activities so that trends over time and demographic patterns (within and between countries) can be accurately measured. The establishment of common terminology and measurement will allow for comparative population based studies from which a strong *Arts and Health* evidence base can be developed.[34] When looking at the association between arts engagement and health, the definition of arts engagement needs to be robust enough to allow researchers to categorise people as engaged or not engaged in the arts, and (for those engaged in the arts) to enable the quantification of level/amount of engagement. Studies that are able to demonstrate an increased health benefit in association with an increased level of arts engagement will provide convincing evidence of the link between health and arts engagement.

The literature provides some insight into the parameters that are important for a comprehensive definition of arts engagement for population based health research.
The Australia Council for the Arts Act (1975) defines arts engagement as creative and interpretative expression through theatre, literature, music, visual arts, film and crafts.[35] Conceptually, the method of defining arts engagement via a list of art forms is useful, however this definition maybe considered narrow as it does not account for many popular art forms such as dance, electronic/digital arts and festivals. In recent years, the Australia Council for the Arts defined arts engagement via the visual arts and craft, music, dance, theatre and literature with consideration given to engagement via ‘creative participation’ or ‘receptive attendance’.[14, 17] This description is valuable as it emphasises the importance of defining arts engagement in terms of art forms and also highlights the importance of level of engagement, that is, whether a person is actively making and creating art compared to receptively attending or observing arts events. Therefore, to progress the arts and health field researchers need to identify current art forms.

Windsor (2005), in a study of arts engagement and general health in England, divided arts engagement into participation and attendance and rated engagement in terms of a list of 41 arts activities and events.[36] Participation was defined in terms of creative activities (e.g. painting), sociable activities (e.g. singing to an audience) and physically demanding activities (e.g. dance).[36] Attendance was defined in terms of being present at a performing arts event (e.g. play or drama, musical, cultural festival) or non-performing arts/cultural event (e.g. a film at a cinema, library, art gallery).[36] The broad list of activities, as well as the distinction between participating and viewing/listening to the activity is informative. However, the way activities were categorised is contentious as both the visual arts and literature, which are normally considered to be art forms in their own right, were merged into the non-performing arts/culture category. Therefore, to progress the arts and health field, researchers need to identify current arts activities. A comprehensive list of activities is useful to guide future research and provide direction as to which activities could be measured when calculating the prevalence of arts engagement. As it is plausible that arts-related wellbeing outcomes are influenced by level of engagement, the development of an arts weighting for each activity would also be useful. It is envisioned that this measure could provide future studies with a means of quantifying art engagement and hence facilitate research looking at the dose-response relationship.
2.3 ARTS FOR HEALTH – PROMOTING, MAINTAINING & IMPROVING POPULATION HEALTH

In 2002, Richard Smith, editor of the British Medical Journal wrote ‘Spend (slightly) less on health and more on the arts – health would probably be improved’. Smith’s contention was based on the idea that diverting a small proportion of the British health budget to the arts could potentially improve the health of the general population, as true efficiencies to healthcare were likely to come from doing things differently, rather than quicker or at a lower cost.

2.3.1 Guiding theories and the need for a health-arts framework

The concept of ‘Arts for Health’ relates to the idea that arts engagement can be a means of directly promoting, maintaining and improving health. According to the World Health Organisation, ‘health’ is a resource for living via a state of physical, mental and social wellbeing and is more than the absence of disease or infirmity. Currently, the relationship between arts engagement and population health is largely unexplained, with a clear framework and scientific approach needed. For researchers to establish whether or not a causal relationship exists between the arts and health the following needs to occur: (1) a plausible conceptual framework of the relationship between arts engagement and health should be developed; (2) within this framework, possible confounders and effect modifiers to the health-arts relationship should be identified; (3) good study designs, that consider coherence and temporal order, need to be employed, and (4) the strength, consistency, specificity and dose-response relationship between arts engagement and health should be considered. The development of a health-arts framework is a step towards the conceptualisation of a causal arts and health model, and of value in: (1) the design and analysis of research studies that seek to build the health-arts evidence base; (2) health settings that use social prescribing for health promotion, or to complement conventional medicine; (3) in teaching students about the impact of the arts, and (4) the development of health-arts policy and practice.

In the absence of a prevailing health-arts theory(s) to guide research and practice, we must look to other fields for guidance when developing and structuring projects. Theories/paradigms of relevance to the field of Arts and Health include the
biopsychosocial model of health,\cite{40} the positive psychology paradigm\cite{41} and theories of social epidemiology.\cite{42} These theories are useful in guiding the development of hypotheses; in the selection and design of research instruments; in highlighting possible themes/variables of interest and in describing and understanding the health-arts relationship.

### 2.3.1.1 Biopsychosocial model of health

The biopsychosocial model of health is a blueprint for research, teaching and healthcare.\cite{40} The model takes into account determinants of health and highlights the importance of psychological, social and biophysical factors in understanding both illness and wellbeing (Figure 2.1). The biopsychosocial model suggests that biophysical factors (e.g. genetics, physical health, disability, pain, immune function, medication use); psychological factors (e.g. self-esteem, mood/emotions, memory, attitudes), and social factors (e.g. socio-economic status, income, profession, education, social support) influence health outcomes. These factors should be considered when conducting research, prevention programs and treating illness.

![Biopsychosocial model of health](image)

#### Figure 2.1: Biopsychosocial model of health

### 2.3.1.2 Positive Psychology Paradigm

The positive psychology paradigm is used in many research fields (e.g. health, education, social work). The paradigm highlights the importance of positive emotions, individual traits/strengths and positive institutions/communities to enhance a person’s wellbeing and quality of life.\cite{41} The positive psychology movement started in the 1990s,\cite{43} and focuses on happiness, positive health and well-being. Advocates of the
field, such as Martin Seligman and Mihaly Csikszentmihalyi, suggest that health should not just be about the study of illness, but should also focus on the things that help people to thrive, factors that nurture strengths (e.g. interpersonal skills, knowledge) and the everyday conditions under which people flourish. According to this paradigm, to achieve improvements in health, it is not enough to only research and treat illness, as ‘well’ members of the general population also need advice, information, activities and techniques to obtain a happy and fulfilling life.[41]

2.3.1.3 Theories of social epidemiology
Social epidemiology emerged in the 1950s. Within this field, the main theories used to explain population differences in health and wellbeing are: (1) psychosocial, (2) social production of disease, and (3) eco-social.[42] Psychosocial epidemiology focuses on human interactions and psychological factors (e.g. internal and external stressors) in the social environment that influence susceptibility to ill-health. Social production of disease (also known as the political economy of health) focuses on the economic and political determinants of health (e.g. poverty, income, social class, social justice). Eco-social theory analyses health via a multi-level approach that focuses on biology, ecology and social factors (e.g. the cell, the individual, the community).

2.3.2 Arts and Health outcomes
In the past, the concept and measurement of health focused on ‘ill health’, as the main problem facing the general population was early death and disease.[44] As a result of social measures and medical advances, since the mid-twentieth century, the health landscape has changed as most people can now look forward to living a long (60-70 years) and mostly disease-free life (especially those living in ‘developed’ versus ‘developing’ countries).[44] This change, has allowed the concept of positive health to emerge, whereby, if ‘health’ relates to physical, mental and social wellbeing,[38, 40] then the arts, have a unique contribution to make to both individual and community outcomes.[45, 46]

2.3.2.1 Mental health and the arts
Good mental health or being ‘mentally healthy’ can be defined as a state of well-being whereby an individual is able to contribute to their community, cope with the stresses of everyday life, is able to realise their potential and work productively.[47] Good
mental health is essential for individual and community wellbeing.[48] Poor mental health is a leading cause of mortality, disability and burden of disease.[48, 49] There is a growing body of evidence that arts engagement improves mental health. Clinical studies have found that arts engagement promotes recovery, relaxation and mental health by reducing patient stress, anxiety and depression.[50-52] Arts programs for people experiencing mental health problems have been found to increase confidence, self-esteem and self-understanding in participants.[3, 53] In the elderly, arts programs reduce depressed mood, increase confidence, enhance self-worth and promote positive aging.[54, 55] Arts programs with young people have been linked with improved motivation, self-image, hope for the future, confidence and self-esteem.[56] Where population-based studies have been conducted, arts engagement has been linked with perceptions of happiness, stress reduction and personal fulfilment.[14, 15, 17, 57]

2.3.2.2 Social health and the arts

Social health relates to the circumstances in which individuals are ‘born, live, work and age’, which in turn influence their wealth, power, control and access to resources.[58] Inequalities in health are therefore influenced by inequalities in society.[59] Social health research focuses on a number of areas including quality of life, economic wellbeing (e.g. income, employment), social position, education, social problems (e.g. crime, homelessness) and the quality/degree of engagement in community related activities/events.[60] The consequence of a social gradient in health often leads to a focus on those who are the most disadvantaged. However, The Marmot Review suggests that everyone below the ‘most privileged’ (i.e. the majority of the general population) would benefit from a society that maximises individual potential.[59]

The US president, John F. Kennedy held the view that the arts were a core measure of a society’s wellbeing and suggested that “the life of the arts, far from being an interruption, a distraction, in the life of a nation, is very close to the centre of a nation’s purpose—and is a test of the quality of a nation’s civilization”.[60] Arts engagement is associated with skills such as problem-solving, novel thinking and is believed to be an essential part of what keeps us connected with the self and others.[2, 52, 61] The arts also entail inclusive processes that act as a catalyst for bonding social capital (i.e. creating connections between people who are similar in terms of specific
characteristics, e.g. socioeconomic status, age) and bridging social capital (i.e. creating connections between people who are different in terms of specific characteristics).[62] Community arts projects with specific target groups (e.g. people with disabilities, mild/moderate depression, minority groups, young people) have been found to expand participants’ social networks, reduce social isolation, improve participants’ ability to relate to and communicate with others, encourage acts of reciprocity and facilitate a sense of community belonging.[3, 55] There is a growing body of evidence that arts engagement also improves quality of life.[57, 63, 64] The arts have also been used in urban renewal projects to encourage community cohesion, education and the development of civically valuable behaviours including co-operation, community pride, tolerance, trust and respect.[62, 65, 66] In Australia, storytelling has been utilised to encourage community healing after forest-fires.[67]

2.3.2.3 Physical health and the arts
As previously mentioned, the concept of physical health used to focus on death and illness.[44] Now, a definition of physical health also incorporates positive concepts such as wellness, longevity, physical fitness, good nutrition and self-care.[44] Research conducted in the United Kingdom, America and Sweden suggests that after controlling for a variety of factors (e.g. age, sex, income, education), attending cultural events was positively associated with self-reported general health and longevity.[68-70] This could in part be due to the arts indirectly influencing biological mechanisms (e.g. arts participation leading to stress reduction, which thereby causes changes to immune function).[68] With the exception of general health and longevity, few studies have looked at the direct physical health outcomes of arts engagement,[2] such as health behaviours and physical activity.

2.4 HEALTH IN ARTS - THE ARTS AS A HEALTH PROMOTION SETTING
A ‘health setting’ can be defined as a place or social context where environmental, organisational and personal factors interact to affect health and wellbeing.[71] Working in medical settings, schools, workplaces and recreational venues constitutes an important dimension of health promotion policy and practice.[72] Arts
organisations engage with members of the public via creative activities or artistic events and are effective in engaging with both members of the general population[36] and specific target groups.[54, 56, 73] To date, the focus of most health-arts research has been on the use of the arts in medical and community settings. The idea of bringing health to an arts setting (e.g. via the promotion of health messages) has largely been ignored.

2.4.1 Health sponsorship
Many funding bodies support community arts organisations financially via philanthropy or sponsorship and in so doing promote access, participation and community wellbeing. ‘Health sponsorship’ can be defined as the provision of funding in exchange for the right to promote health messages or products and to request the implementation of health policies and enviro-structural changes at sponsored events and venues (e.g., cigarette smoke free events).[74, 75] Health promotion sponsorship aims to achieve health outcomes rather than commercial or monetary gains.[74-77]

2.4.2 Health in Arts sponsorship in Western Australia
Funded via a tax on tobacco products, the Western Australian Health Promotion Foundation (Healthway) is a major sponsor of the arts in Western Australia. Since 1991, Western Australian community arts (and sports) organisations have been able to access sponsorship funding from Healthway in exchange for the introduction of healthful environments, the implementation of health promotion policies and the promotion of health messages to their members, participants, and audiences. Sponsored art forms include the visual arts, theatre, dance, music, film, literature, circus and community festivals.

In Australia, a number of factors have facilitated the adoption of sponsorship by health promoters, including the high cost of media advertising and the synergy between the goals of health promoters and community organisations.[78] Due to the population reach of arts events and the adverse health risk-factor profiles exhibited by many people who engage in the arts, these settings are ideal for health promotion interventions.[74, 79, 80]. For example, in Western Australia, patrons of the arts are
less likely to be smokers but more likely to be unsafe drinkers than non-patrons and only one third of arts patrons consume fruit/vegetables at recommended levels.[81] Between 2001 and 2006, Healthway sponsored more than 850 arts projects to the value of AUD$10 million, with an average audience attendance of approximately 6200 people per project. The sponsorship methods used by Healthway include the use of signage (e.g. large billboards, perimeter fence signage, banners); announcements (public address system, performer endorsements); leaflets about health behaviours and health conditions; event naming rights; program advertisements/editorials; health messages on admission tickets; promotional clothing (e.g. hats, T-shirts) and merchandise (e.g. key rings, stickers, water bottles).

2.4.3 Health in Arts sponsorship theory
Healthway has taken a social marketing approach to sponsorship in that it funds arts activities/events with the aim of encouraging healthy lifestyles, encouraging healthful settings and influencing general population attitudes and beliefs to encourage the general public to voluntarily modify unhealthy behaviours. Underpinning the planning, execution and evaluation of Healthway’s approach is an adaption of McGuire’s 1984 communication-behaviour change model.[82] As shown in Figure 2.2, this model emphasises a communication sequence which starts at awareness (e.g. awareness of a health message promotion such as ‘QUIT’) through to intention/behavioural action (e.g. a person thinking about and then voluntarily quitting smoking). The cognitive impact of exposure to a health message forms the focus of Healthway’s approach.[82]

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![Figure 2.2: Healthway’s cognitive impact model](image-url)
2.4.2 The Arts, health messages and cognitive impact

The promotion of health messages at sponsored events allows Healthway to communicate with the general public in the hope of influencing health awareness, comprehension, acceptance, intentions and ultimately behavioural actions of people attending (e.g. spectators, audience) or taking part in (e.g. participants, staff) a sponsored event.\cite{82} By promoting a health message, Healthway aims to have a cognitive impact on those engaged in a sponsored event so as to encourage positive health behaviours. Healthway’s messages are used to increase awareness in a range of areas including anti-smoking, nutrition, physical activity, safe alcohol consumption and sun protection. For the past two decades, Healthway in partnership with other health agencies, has exposed the Western Australian community to health messages via the arts. This health in arts approach is relatively unique to Western Australia, as the arts are not funded for their artistic or therapeutic benefits, but instead sponsored to promote health to people at arts events.

Sponsorship can achieve high levels of exposure to a promoted message.\cite{83, 84} Studies also suggest that sponsorship agreements between health agencies and sports organisations are effective in raising health message awareness,\cite{75, 78} attitudes,\cite{85} behaviour\cite{86} and the creation of healthful sporting environments.\cite{77} It was therefore the aim of this research to see if the arts were also a viable setting for health promotion by assessing health message awareness of those engaged in the arts compared to those not engaged in the arts at a population level, and comparing the cognitive impact of anti-smoking messages at Healthway sponsored arts events to sports events, a more traditional and established health promotion setting.

2.5 SUMMARY & CONCLUSION

At a population level, the arts have the potential to promote, maintain and improve mental, social and physical health, however scientific evidence is lacking. To encourage an arts related approach to general population health, researchers now need to shift their focus from clinical populations and specific target groups towards the general public; and, from art therapy and specific programs to the art people do as part of their everyday life for enjoyment, entertainment, or as a hobby. Defining arts
engagement and developing a health-arts framework for population based research will guide research and practice and is the first step in understanding the health-arts causal pathway. While it may be apparent to those involved in the arts that engagement has health benefits, a scientific population based approach is needed to elucidate and quantify the health-arts relationship and assess the viability of the arts as a health promotion setting.
Title: Kiss

Mixed media on canvas (90cm x 120cm)
This painting was created by the candidate during the course of the PhD
Chapter 3

Study Methods
Chapter 3: STUDY METHODS

3.0 INTRODUCTION

This chapter provides an overview of the methods used in the studies conducted during the course of this PhD. Overall, a mixed-methods approach was employed and utilised both qualitative and quantitative techniques. As this is a thesis by publications, Chapters 4 to 8 are presented as manuscripts. Each of these chapters also contains a detailed methods section as it appears in the related journal on the date of publication (or submission for Chapter 6). Following a review of the literature, this PhD comprised four phases. In phase one an online survey of arts and arts/health experts was developed so as to create a definition of arts engagement for population based research. Using the definition of arts engagement created in phase one, phase two, focused on the development of a health-arts conceptual framework via face to face interviews of people engaged in the arts. Guided by phase one and two, in phase three, a telephone survey was conducted to measure the prevalence of arts engagement in the general population and to quantify the relationship between arts engagement and mental wellbeing. In phase four, a secondary analysis of Healthway data assess the viability of the arts as a health promotion setting. The way each phase of this research corresponds to the objectives is summarised in Table 3.1. Permission to conduct this PhD was granted by The University of Western Australia Human Research Ethics Committee (RA/4/1/2490).

<table>
<thead>
<tr>
<th>Objective (Chapter)</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop a definition of arts engagement suitable for use in population based research (Chapter 4)</td>
<td>Literature Review</td>
</tr>
<tr>
<td><strong>Arts for Health:</strong> Develop a conceptual framework of the relationship between arts engagement and health (Chapter 5)</td>
<td>●</td>
</tr>
<tr>
<td><strong>Arts for Health:</strong> Measure the prevalence of arts engagement in the general population and quantify the relationship between arts engagement and mental wellbeing (Chapter 6)</td>
<td>●</td>
</tr>
<tr>
<td><strong>Health in Arts:</strong> Assess the effectiveness of the arts as a setting to promote health messages to the general population (Chapter 7 &amp; 8)</td>
<td>●</td>
</tr>
</tbody>
</table>
3.1 LITERATURE REVIEW

This PhD commenced with a review of the literature. As the field of Arts and Health is fairly new and inter-disciplinary, the literature was sourced from a variety of fields including the arts, public health, psychology, education and medicine. Literature searches were conducted using PubMed, One Search, Science Direct, Google Scholar, and Google. The review was also informed by article references, books, book chapters, editorials and reports. Keyword searches (singular or in combination) included:

- Art, arts, culture, creativity, creative arts,
- Arts and health, arts for health, arts into health, healing arts, arts/health, participatory arts, community arts, community, art in hospitals, medical humanities, art(s) in healthcare settings, leisure, pastime, performance, attendance, engagement, participation, audience,
- Outcomes, health, healthy, positive health, therapy, prevention, behaviour, benefits, risk reduction, mental health, mental wellbeing, positive mental health, mentally healthy, social health, social capital, social inequality, social inclusion, social determinants of health, physical health, exercise, physical activity, longevity, happiness, wellbeing, healing, flourishing, flow, quality of life,
- Health policy, art policy, health message, health promotion and public health.

With regard to prevalence of arts engagement, inter-country comparisons are common in the literature. To inform this research, a review of recent reports (i.e. published in the last five years, 2010-2014) from a variety of countries was conducted to obtain an indication of general population arts engagement globally. It should be noted that inter-country comparisons of arts engagement are difficult due to inconsistencies in the types of events/activities surveyed, variations in reference periods, differences in the eligible sample surveyed and methodological inconsistencies (e.g. survey wording, mode of delivery). Given this, the comparisons in Table 2.1 were designed to only be a ‘general indicator’. The reports were sourced via One Search, Google Scholar and Google. Keywords (in combination) included:

- statistics, prevalence, indicator,
- culture, art,
- participation, engagement, attendance, and
The selection of country/continent names were guided by existing comparative documents produced by the Australian Council for the Arts and the International Federation of Arts Councils and Cultural Agencies.[32, 87] The countries/continents included in the search were Australia, New Zealand, United Kingdom (as well as Scotland and Northern Ireland), United States, Europe, Japan, Singapore, Canada, Norway, Finland, Bahrain, Croatia, Germany, Palestine, Turkey, Switzerland, Latvia, Sweden, Austria, France, Slovenia, Czech Republic, Portugal, and Belgium. Data for Finland, Bahrain, Croatia, Germany, Palestine, Turkey, Switzerland, Latvia, Sweden, Austria, Slovenia, Czech Republic, Portugal, Belgium could not be located or were not in English and therefore do not appear in Table 2.1.

### 3.2 PHASE 1: INTERNATIONAL SURVEY OF EXPERTS

Two online surveys of Arts or Arts/Health experts were conducted so that a definition of arts engagement for population based research could be developed. Online surveys were utilised as they could be personalised to the respondent, were cost effective to send to experts globally, excluded the need for data entry and provided experts with easy (real-time) access to the survey irrespective of location. The study aimed to comprehensively list the various types of art forms and activities and once identified, to quantify these activities in terms of the amount of arts engagement experienced when taking part in these pursuits.

The study was comprised of two parts. First, an online survey of experts was conducted via ‘Checkbox’ to explore the concept of arts engagement; to generate a comprehensive list of art forms and activities, and to inform the development of the phase two interviewer guide (survey one). A second follow-up survey, was conducted via ‘Qualtrics’ of participating respondents to rate the activities generated from survey one, in terms of the amount of arts engagement experienced when a person takes part in these activities (survey two). Both Checkbox and Qualtrics are online survey tools for creating and distributing surveys and collecting data.
3.2.1 Design, recruitment and sampling

The study was cross-sectional in design. Using the names obtained from journal articles, books, reports (sourced via the literature review), websites and two arts databases (Healthway and Curtin School of Art), a list of 280 experts was compiled. A list of the organisations that experts were affiliated with is shown in Table 3.2. Some experts were affiliated with more than one organisation.

Table 3.2: International expert survey - affiliations

<table>
<thead>
<tr>
<th>Source</th>
<th>Organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts organisations,</td>
<td>Arts Council England, Australia Council for the Arts, Arts Access Australia, Australian</td>
</tr>
<tr>
<td>organisations</td>
<td>of Western Australia, Artatac, Art On The Move, Australian Dance Council, Avon Valley Theatre,</td>
</tr>
<tr>
<td></td>
<td>Black Swan Theatre Company, Barking Gecko Theatre Company, Craft Australia, Community Arts</td>
</tr>
<tr>
<td></td>
<td>Network Western Australia, Cancer Council WA, Community and Regional Arts Development,</td>
</tr>
<tr>
<td></td>
<td>Contemporary Music, Country Arts WA, City of Bunbury, City of Fremantle, City of Joondalup,</td>
</tr>
<tr>
<td></td>
<td>City of Mandurah, City of Rockingham, City of South Perth, Drug and Alcohol Office WA,</td>
</tr>
<tr>
<td></td>
<td>Designer Fashion, Disability Arts Inclusion Initiatives, DADAA WA, Denmark Arts Council,</td>
</tr>
<tr>
<td></td>
<td>Department of Culture and the Arts WA, Esperance Community Arts, Festival of Youth,</td>
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<tr>
<td></td>
<td>Fremantle Children's Literature Centre, Fremantle Arts Centre, Fairbridge Festival, Festival</td>
</tr>
<tr>
<td></td>
<td>of Busselton, Gallery East, Goddard de fiddes, Galerie Dusseldorf, Garnduwa Amboony Wirnan</td>
</tr>
<tr>
<td></td>
<td>Aboriginal Corporation, Holyoake the Australian Institute on Alcohol and Addictions, International</td>
</tr>
<tr>
<td></td>
<td>Art Space Kellerberrin Australia, Office for Children &amp;Youth WA, Katherine Kalaf Gallery,</td>
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<tr>
<td></td>
<td>Kulcha, Lawrence Creative Strategy, Lawrence Wilson Art Gallery, Lunar Circus School,</td>
</tr>
<tr>
<td></td>
<td>Mental Health Trust, Metropolitan Migrant Resource Centre, Multicultural Arts of WA, Mundaring</td>
</tr>
<tr>
<td></td>
<td>Arts Centre, Musica Viva Australia, NiteStar, NBT WA Music, NHS Health Development Agency,</td>
</tr>
<tr>
<td></td>
<td>National Heart Foundation, Sotheby's, Perth International Arts Festival, Perth Jazz Society,</td>
</tr>
<tr>
<td></td>
<td>Perth Theatre Company, Propel Youth Arts WA, Perth Institute of Contemporary Art, Royal</td>
</tr>
<tr>
<td></td>
<td>Agricultural Society of WA, Steps Youth Dance Company, Spare Parts Theatre, SymbioticA, Tura</td>
</tr>
<tr>
<td></td>
<td>New Music, Theatre Kimberley, Town of Bassendean, Town of Kwinana, Tura New Music Ltd,</td>
</tr>
<tr>
<td></td>
<td>Turner Galleries, VicHealth, West Australian Newspaper, WA Circus School Incorporated, WA</td>
</tr>
<tr>
<td></td>
<td>Youth Jazz Orchestra Association, WA Youth Music Association, WA Youth Theatre Company, WA</td>
</tr>
<tr>
<td></td>
<td>Arts Federation, West Australian Symphony Orchestra, West Australian Opera, West Australian</td>
</tr>
<tr>
<td></td>
<td>Ballet, West Australian Music Industry Association, Writing WA, YMCA Perth Youth &amp; Community</td>
</tr>
<tr>
<td></td>
<td>Services, Yirra Yaakin Aboriginal Corporation.</td>
</tr>
<tr>
<td>Universities, Art</td>
<td>Anglia Ruskin University, Australian National University, Canterbury Christ Church University,</td>
</tr>
<tr>
<td>schools</td>
<td>Cal Arts, Curtin University, Murdoch University, Charles Darwin University, Edith Cowan</td>
</tr>
<tr>
<td></td>
<td>University, Flinders University, Georgetown University, Kuwait University, Manchester</td>
</tr>
<tr>
<td></td>
<td>Metropolitan University, New York Academy of the Arts, Peninsula Medical School, Queensland</td>
</tr>
<tr>
<td></td>
<td>University of Technology, Royal College of Music London, RMIT University, School of Visual</td>
</tr>
<tr>
<td></td>
<td>Arts New York, Temple University, University of Bradford, University of California Los Angeles,</td>
</tr>
<tr>
<td></td>
<td>University College London, University of Durham, University of Glasgow, University of</td>
</tr>
<tr>
<td></td>
<td>Lancashire, University of Melbourne</td>
</tr>
<tr>
<td></td>
<td>University of Newcastle, University of New South Wales (COFA), University of Notre Dame</td>
</tr>
<tr>
<td></td>
<td>Australia, University of Plymouth, University of Sussex, University of South Australia,</td>
</tr>
<tr>
<td></td>
<td>University of Sydney, University of Tasmania, University of Ulster, University of Victoria</td>
</tr>
<tr>
<td></td>
<td>British Columbia, University of the West of England, University of Western</td>
</tr>
<tr>
<td></td>
<td>Australia, Victorian Collage of the Arts.</td>
</tr>
<tr>
<td>Journals</td>
<td>Arts and Health, Medical Humanities Journal, Perspectives in Public Health, UNESCO Observatory</td>
</tr>
</tbody>
</table>
A person was considered to be an expert if they met at least one of the following criteria:

- they had published an article in a refereed arts or arts-health journal,
- had written a published arts or arts-health report,
- were an arts or arts-health academic, or
- were a director, manager, administrator or curator of a major arts organisation.

A total of 280 experts, for which email addresses could be obtained, were invited to participate in online survey one on the 23rd November 2009. Non-respondents were sent a reminder email on the 30th November and the 8th December 2009. Of the 123 experts who responded to survey one, 100 were still contactable via the same email address on the 11th May 2010 and were invited to participate in the second survey. Non-respondents were sent a reminder email on the 21st May and 31st May 2010. A total of 57 experts completed the second survey.

### 3.2.2 Surveys and data collection

**Survey one:** A copy of survey one is available in Appendix B1.1. The survey was guided by the literature and pilot tested by a panel of ten experts in the field of the arts, arts-health, public health or evaluation. The survey took approximately ten minutes to complete and contained demographic items as well as open ended questions about the concept of arts engagement (i.e. characteristics, activities, events, method of engagement). **Respondents were specifically asked to assist in the creation of a list of ‘typical’ arts engagement activities/events.** In their examples, respondents were asked to specify both the type of activity (e.g. painting) and the method of engagement (e.g. make, create, design, view). Up to 15 activities in their field of expertise were recorded per expert. Respondents were asked the following question:

*People typically engage in a broad variety of both arts and non-arts activities as part of their weekly routine or as an occasional or one-off experience. Engagement can be passive or active. Examples of such activities include:*

- playing a musical instrument as part of a live music performance;
- participating in a team sport at a local community centre;
- visiting a gallery to view works of art;
- watching a ‘main stream’ film at a local cinema;
- gardening at home, and/or
- participating in dance lessons at a local dance studio.

*One of our research objectives is to create a list of typical Arts Engagement Activities. To do this, we require your help to identify activities/events that should be included on this list.*
(Q7a) In the space provided below please list the types of activities/events related to your field of expertise that you consider to be examples of arts engagement activities. For each example, please indicate the ‘type’ of arts activity and the ‘method of participation’ as shown in the examples above.

1. 
2. 
3. 
4. 
5. 
6. 
7. 
8. 
9. 
10. 
11. 
12. 
13. 
14. 
15. 

To inform the development of the phase two interviewer guide, respondents were also asked how they thought arts engagement could influence the physical, mental or social wellbeing of a person. Specifically, respondents were asked:

Q3. In what ways (if any) do you think arts engagement can positively influence the physical, mental or social wellbeing of a person?

Q4. In what ways (if any) do you think arts engagement can negatively influence the physical, mental or social wellbeing of a person?

Survey two. A copy of survey two is available in Appendix B1.2. The survey was pilot tested by the same panel of experts who reviewed survey one. The survey took approximately twenty minutes to complete. Respondents were asked to rate 108 activities in terms of the ‘amount’ of arts engagement experienced by a person when they took part in these activities. The activities were grouped under the following headings:

- Sound and performing arts
- Visual arts, design and craft
- Literature
- Online, computer and electronic arts
- Community and cultural festivals, fairs and events
- Health specific
- Other activities / events
The list included the arts activities generated from survey one, and for comparison purposes, other leisure activities that could also potentially have a positive effect on health and wellbeing (e.g. sports engagement, holidays, religious events). Respondents rated each activity on a 10 point scale. As shown in Figure 3.1, the rating scale ranged from zero to nine where ‘1’ represented a low level of arts engagement experienced when a person takes part in the stated activity, up to ‘9’ which represented a high level of arts engagement experienced. Alternatively, respondents could decide that the listed activity was not an arts activity at all. In this case, the activity was given a rating of zero i.e. ‘0’ - not an arts activity.

<table>
<thead>
<tr>
<th>Not an Arts Activity</th>
<th>Level of Arts Engagement experienced</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Low</td>
</tr>
<tr>
<td>1</td>
<td>Low</td>
</tr>
<tr>
<td>2</td>
<td>Low</td>
</tr>
<tr>
<td>3</td>
<td>Low</td>
</tr>
<tr>
<td>4</td>
<td>Low</td>
</tr>
<tr>
<td>5</td>
<td>Low</td>
</tr>
<tr>
<td>6</td>
<td>Low</td>
</tr>
<tr>
<td>7</td>
<td>Low</td>
</tr>
<tr>
<td>8</td>
<td>Low</td>
</tr>
<tr>
<td>9</td>
<td>Low</td>
</tr>
</tbody>
</table>

*Figure 3.1: International survey of experts – survey two rating scale*

### 3.2.3 Data analysis

**Survey one:** Overall, 659 examples of arts engagement activities/events were provided by survey one respondents. A thematic analysis was conducted to identify art form (e.g. performing arts), activity type (e.g. dance) and method of engagement (e.g. participate, learn, attend, teach).[88] Responses were initially read, then NVivo (version 8) was used to manage, code and analyse the data. Keywords relating to specific types of activities and methods of engagement were easily identifiable as survey one respondents had been requested to identify both in their examples. Once art forms, activities and methods of engagement were identified, they were checked by running an NVivo ‘word frequency query’. Overall, the initial list of 659 examples of arts engagement was reduced to 108 individual arts items for which art form, activity type and method of engagement were specified.

**Survey two:** SPSS for Windows (version 17) was used to manage, code and analyse the data. First, a descriptive analysis of respondent ratings was conducted for each arts item generated from survey one to measure central tendency (i.e. medians, means) and response variation (i.e. standard deviation). Second, a principal factor analysis with a Varimax rotation was conducted to see if there were any underlying patterns or constructs in the way respondents rated the 108 arts items. A factor loading cut off of 0.55 was employed.
3.3 PHASE 2: INTERVIEWS WITH MEMBERS OF THE GENERAL POPULATION

As guided by phase one of this study and theories of social epidemiology [42] and the biopsychosocial model of health,[40] the aim of phase two was to develop a framework pertaining to the relationship between arts engagement and general population health.

3.3.1 Design, recruitment and sampling

Qualitative, face-to-face interviews were conducted to develop an in-depth, broad and comprehensive understanding of the research question. Interviewees aged 18 years and over who engaged in the arts were recruited via purposive random sampling.[89] Purposive sampling is often used in qualitative research to gain access to people who are able to answer a specific research question.[89]

The study was advertised via the email lists of two universities, two arts organisations and one health organisation. A copy of the recruitment email is available in Appendix B2.1. It was possible for people receiving the recruitment email to forward (snowball) the email to their friends, family and colleagues. Paper-based flyers were also posted on three (arts related) community notice boards. A copy of the recruitment flyers is available in Appendix B2.1. Based on the definition of arts engagement developed in phase 1, the art forms prompted in the email/flyer were the visual arts, craft, performing arts, literature, electronic/computer arts, and community/cultural festivals. The modes of arts engagement prompted in the email/flyer included making/creating art and attending events. In both the email invitation and paper-based flyers, potential nominees were directed to an online nomination form (Appendix B2.1). The nomination form contained 13 questions (i.e. name, contact details, availability, demographics, arts engagement and consent to participate) and was hosted in ‘Qualtrics’. Based on the definition of arts engagement developed in phase 1, respondents were specifically asked about the methods (e.g. made, created, attend), art forms (e.g. performing arts, literature) and activities (e.g. painting) they engaged in.
Overall, 98 general population adults nominated for inclusion in the study via the telephone (n=2) or by completing an online form (n=96). To increase sample credibility\[89\] and reduce selection bias, of the 98 adults who nominated, 33 people were randomly selected for a face-to-face interview using a random number generator in Microsoft Excel 2010 (i.e. RANDBETWEEN[0,1] where 1 = include). Although there are no established cannons of qualitative practice regarding sample size, the literature suggested that 20 to 30 interviews would be sufficient to reach data saturation (i.e. the point in a study where no new themes or concepts relevant to the research question are evident in the data).\[90\] Of the 33 interviews conducted, data saturation was reached at 27 interviews, but to increase study quality and trustworthiness an extra six interviews (20%) were conducted.

3.3.2 Interview guide and data collection

As guided by phase one of this study and theories of social epidemiology [42] and the biopsychosocial model of health,[40] a semi-structured interview guide was developed by the PhD candidate under guidance from her supervisors.[91] The interview guide was reviewed by a panel of eight experts with experience in market research, the arts or public health and then piloted with two volunteers. A copy of the interview guide (including verbal and visual prompts) is available in Appendix B2.1. The interview guide contained a mix of questions including, but not limited to, those shown below:

- Tell me about your most recent experience of engaging in the arts?
- Tell me about the type of art you do the most?
- If you were to describe to a friend or family member why you <attend>/<participate> in __________, what would you say?
- I’d like to introduce you to two different people (show stick people card). Like you, <Laura>/<John> (name matched to gender of the interviewee) <attends>/<participates> in ________ (activity matched to interviewee’s activity), whereas <Jane>/<Tim> (name matched to gender of the interviewee) never <attends>/<participates> in the arts.
  - How do you think arts engagement positively effects Laura’s/John’s life?
  - How do you think arts engagement negatively effects Laura’s/John’s life?
  - Do you think Laura/John would experience any unintended outcomes or consequences as a result of engaging in the arts? What would they be?
  - How do you think arts engagement makes Laura/John feel?
  - If Jane/Tim was to start engaging in the arts how would his/her life change?
The first three questions asked about the interviewee’s experiences, thoughts and beliefs about their involvement in the arts. The fourth question was phrased in the third person to allow participants to speak freely, especially about negative experiences or behaviours.

Interviews took place between 30th August 2010 and 22nd January 2011. Interviews ran for approximately one hour. All interviews were conducted by the PhD candidate at a time and place convenient to the participant e.g. work, home, coffee shop. Light refreshments were offered (e.g. tea, coffee, water, fruit). At the end of the interview, interviewees were provided with two movie tickets to compensate them for their time. With permission, the interviews were tape recorded and then provided to a professional audio typist who transcribed the interviews (verbatim) into a word document. All transcripts were checked by the PhD Candidate against the tape recordings for accuracy and typing errors.

3.3.4 Data analysis

NVivo 10 was used to manage, code and analyse the data. Using guidelines developed by Braun and Clarke, a thematic analysis was conducted to identify, analyse and report on themes within the interview data.[88] The goal of the analysis was to provide a rich thematic description of the entire data set. Providing an overall description is useful when investigating an under-researched area or when asking participants about a topic that is not well understood.[88] Based on the literature, theoretical nodes were identified prior to coding. The 17 theoretical nodes that formed the starting point for the analysis were learning, identity, economic activity, income, mental health, relaxation, stress reduction, reduced anxiety/depression, confidence, self-esteem, self-understanding, self-expression, social capital, networks, support, physical health and life satisfaction.[2, 3, 14, 16, 36, 37, 50, 51, 53, 57, 62, 65, 66, 68, 69, 92, 93] Interview transcripts were read and then concepts relevant to the research question coded into the theoretical nodes, or as new concepts emerged, coded into inductive nodes. By combining or separating nodes, potential themes and sub-themes were created. The coding process was thorough and inclusive with each data item given equal attention. Each theme was internally coherent, consistent and distinctive. As part of the analysis
process, NVivo ‘word frequency queries’ were run to identify words and word groups (e.g. stem words, synonyms) that occurred most often, as well as the relative and absolute frequency of word/word groups within the data set.[94] To ensure the analysis was comprehensive in terms of data coverage, ‘text search queries’ were used to look for (1) specific themes and sub-themes; (2) words with a shared stem (e.g. health, healthy), and (3) words with related meanings (e.g. healthy, well, fit).[94] As guided by the literature,[4, 36, 68, 69, 95] reference to possible confounders and effect modifiers plausibly related to both health and the arts were identified via a text search query. Via a ‘matrix coding query’, sub-themes were identified as positive, negative and unintended. A matrix coding query enabled concepts to be cross-tabulated across nodes and displayed in a row/column, table format.[94] The resulting table allowed for data assessment and comparison. By ‘clicking’ within the table, qualitative transcript data corresponding to each cell of the matrix could be reviewed.[94] Thematic maps and word clouds were modelled in NVivo to visually represent the relationships between themes and subthemes. Identified themes were named, defined and then classified as either a ‘health’ or ‘health determinant’ outcome. On the basis of whether a sub-theme was of private and/or public consequence, it was categorised as relating to the ‘individual’, ‘community’ or both ‘individual and community’.

3.4 PHASE 3: HEALTHY ARTS TELEPHONE SURVEY

The objective of the Healthy Arts telephone survey was to measure the prevalence of arts engagement in the general population, and then quantify the relationship between arts engagement and mental wellbeing. In addition to mental wellbeing, the PhD candidate acknowledges that phase two of this study also identified social health and physical health as being outcomes of general population arts engagement. However, an investigation of the number of hours of arts engagement needed for good social health and physical health was considered outside the requirements for this PhD and will be pursued post-doctorally.

3.4.1 Design, recruitment and sampling

A cross-sectional telephone survey of the Western Australian general population (18+ years) was conducted. Residential telephone numbers were randomly selected from
the Australian Electronic White Pages telephone directory. To increase the likelihood of a representative distribution of respondents, once contacted, the adult in the household who would next be having a birthday was invited to participate in the study.

3.4.2 Survey and data collection

The development of the Healthy Arts telephone survey instrument was guided by phase one and two of this study and theories of social epidemiology, the biopsychosocial model of health and the positive psychology paradigm.[40-42] The survey was also informed by the inclusion of pilot/PhD test questions to Healthway’s 2010 survey of Community Recreation and Health.

Pilot/Test Questions (Included as part of the Healthway’s 2010 survey of Community Recreation and Health)

In both the 2006 and the 2010 Healthway’s survey of Community Recreation and Health, respondents were asked:

(HWay Q1) During the last year, have you attended any type of professional concert, play, dance or non-performing arts event? (Yes/no)

(HWAY Q2) Are you involved in any way at all in any type of organisation or group involved with the performing or non-performing arts? and

(HWAY Q3) Overall, which of the following best describes how often you actually do any arts activities? (Not at all, less than once a month, once or more a month but less than once a week, once a week, more than once a week).

In 2006, 55% of respondents reported attending an arts event and 42% participating in the arts.[81] When the three Healthway questions were combined the estimated prevalence of arts engagement was 62%, which was much lower than the prevalence reported by the Western Australian Department of Culture (88%).[96] It was suspected that most members of the Western Australian general population did not have a clear understanding of the arts – that is, what the arts is and whether or not they took part in the arts. Therefore, Healthway’s questions miss-classified respondents as ‘arts/non-arts’ and under estimated the prevalence of arts engagement as the questions relied too heavily on respondent knowledge and perceptions. In addition the questions only
asked about membership, participation and attendance, not about learning or work/volunteering. In 2010, Heathway allowed the candidate to trial new, differently worded arts engagement questions to see how it influenced responses. First, the three original Healthway arts questions were asked, and then at the end of the survey (i.e. 34 questions later), respondents were introduced to another set of arts questions. These ‘PhD test questions’ were guided by phase 1 of this study i.e.:

**Section introduction:** We talked earlier about some of the things you do in relation to the arts. I’d now like to ask you a few more questions in a bit more detail. This time, the arts are defined in terms of the visual arts, literature, electronic art, community or cultural festivals and the performing arts. By visual arts I mean things like painting, craft, photography, textiles and jewellery making. By performing arts I mean things like theatre, music, plays, dance and film, including main stream movies. By literature I mean reading or creative writing in the form of short stories, poetry, books and plays. By electronic arts I mean creating art via an electronic or computer medium such as digital photography and by festivals I mean cultural, community or music festivals such as Southbound or the Royal Show.

**(PhDTest.Q1 Learn)** In the last 12 months did you take part in any arts related classes, workshops or training programs? (Yes/No),

**(PhDTest.Q2 Work/ Volunteer)** In the last 12 months did you work in the arts either in paid employment or as a volunteer (Yes/No),

**(PhDTest.Q3 Participate)** Keeping in mind that our definition of the arts now includes the visual arts, literature, electronic art, community or cultural festivals and the performing arts... In the last 12 months, have you actively made or created art such as photography, drawing, writing a story, painting an electronic picture, playing a musical instrument, or actively participating in an arts event as a performer such as a singer, actor or musician? (Yes/No),

**(PhDTest.Q4 Attend)** In the last 12 months have you visited or attended any arts events, such as exhibitions, performances, plays, concerts, festivals, artist talks or movies? (Yes/No),

**(PhDTest.Q5 Member)** In the last 12 months, were you a member of an arts related society, club or organisation? (Yes/No).
As shown in Table 3.3, variation was found in how people responded to the Healthway versus the PhD test questions (n=2005). As mentioned previously, in 2010, the prevalence of engagement using the three Healthway questions was 62%. The prevalence of engagement, using the more detailed PhD test questions, was 70%. Overall, the categorization of respondents as arts/non-arts was aided by adding questions about arts learning, work/volunteering and by the provision of extra detail regarding method of arts engagement and arts activity.

Table 3.3: Healthway’s survey of community recreation and health versus PhD test questions (n=2005)

<table>
<thead>
<tr>
<th>Type of arts engagement</th>
<th>% Yes</th>
<th>Findings</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attend</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HWay</td>
<td>56%</td>
<td></td>
<td>300 people who said no to the HWay questions said yes to the PhD test question</td>
</tr>
<tr>
<td>PhD</td>
<td>57%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Member</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HWay</td>
<td>12%</td>
<td></td>
<td>147 people who said yes to the HWay questions said no to the PhD test question</td>
</tr>
<tr>
<td>PhD</td>
<td>7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learn</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HWay</td>
<td>Not asked</td>
<td>Captured 20 extra people that otherwise would have been ‘non arts’ re prevalence</td>
<td></td>
</tr>
<tr>
<td>PhD</td>
<td>12%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work / Volunteer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HWay</td>
<td>Not asked</td>
<td>Captured 14 extra people that otherwise would have been ‘non arts’ re prevalence</td>
<td></td>
</tr>
<tr>
<td>PhD</td>
<td>9%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HWay</td>
<td>27%</td>
<td></td>
<td>243 people who said ‘none’ to the HWay questions said yes to the PhD test question. In addition, 79 people who said ‘once a month’, 59 people who said ‘once a week’ and 58 people who said ‘more than once a week’ said no to the PhD question</td>
</tr>
<tr>
<td>PhD</td>
<td>35%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Healthy Arts telephone survey

The Healthy Arts telephone survey contained 30 questions and took 15 minutes to complete. The survey was developed by the PhD candidate under the guidance of her supervisors. The survey contained questions about arts engagement over the previous 12 months (e.g. type, days and hours engaged), involvement in non-arts activities (e.g. sports engagement, religious activities, holidays), general health, mental wellbeing, health behaviours and demographics. Based on the comparison of Healthway and PhD test questions (above), it was also decided that a ‘yes/no’ response frame was easily understood by respondents and should be repeated in the Healthy Arts telephone survey. The section of the Healthy Arts phone survey on ‘arts engagement
over the previous 12 months’ was separated into five sections (as per the findings of Phase 1 of this PhD) i.e.:

- attendance,
- participation,
- learning,
- work / volunteering, and
- membership.

For learning, work/volunteering and membership, the questions wording was the same as the PhD test questions. As it was found that wording influenced people’s responses, it was decided that for the attendance and participation questions, the Healthy Arts telephone survey would provide as much detail as possible with regard to art form and activities. A copy of the Healthy Arts telephone survey is available in Appendix B3.1. Overall six questions related to arts attendance, five to participation, one about learning, one about working/volunteering and one about membership. For each survey item respondents were asked if they had engaged in the arts activity/event in the previous 12 months (yes/no). If yes, they were asked to describe the activity/event. Respondents were then asked (approximately) how many days in the last 12 months they had engaged in each type of activity/event, followed by (on a typical day), how many hours they spent engaging in that activity/event. Before implementation, the survey was reviewed by a panel of ten experts with experience in market research, the arts and public health. The survey was piloted and then carried out by trained telephone interviewers at the Edith Cowan University Survey Research Centre using a computer assisted telephone interview system.[97] All telephone interviews were conducted between September 2011 and May 2012

3.4.3 Dependent variable: mental wellbeing

As guided by the literature and Phase 2 of this study, for the general population, arts engagement mostly results in positive mental health outcomes such as happiness, relaxation, self-esteem, confidence and pleasure. With this in mind a number of positive mental health scales were examined (e.g. Subjective Happiness Scale, Personal Wellbeing Index, WHOQol-8). The Warwick-Edinburgh Mental Wellbeing Scale
WEMWBS was chosen as it (1) encompassed the sub-themes identified in Phase 2 of the research (2) it is a valid and reliable scale and (3) was suitable for delivery via the telephone. Therefore, the dependent variable in this study was subjective mental wellbeing and measured by asking respondents the 14 items contained in WEMWBS i.e.:

- I’ve been feeling optimistic about the future,
- I’ve been feeling useful,
- I’ve been feeling relaxed,
- I’ve been feeling interested in other people,
- I’ve had energy to spare,
- I’ve been dealing with problems well,
- I’ve been thinking clearly,
- I’ve been feeling good about myself,
- I’ve been feeling close to other people,
- I’ve been feeling confident,
- I’ve been able to make up my own mind about things,
- I’ve been feeling loved,
- I’ve been interested in new things, and
- I’ve been feeling cheerful.

Permission to utilise WEMWBS was granted by the University of Warwick. WEMWBS was scored by summing responses to each of the 14 items. Item responses were 1=none of the time, 2=rarely, 3=some of the time, 4=often, and 5=all of the time. The minimum possible WEMWBS was 14, the maximum was 70.

3.4.4 Independent variable: arts engagement

The independent variable in this study was total hours engaged in the arts in the last 12 months. Quantifying engagement by asking questions about activities/events over the last 12 months [36, 99] and measurement in terms of time [100, 101] are common in the literature.

3.4.5 Data analysis

The analysis strategy involved a descriptive investigation of the data followed by Pearson chi-square tests to explore differences by arts engagement and ANOVAs to
explore differences in average WEMWBS scores. Arts ‘attendance’ in the previous 12 months was calculated based on respondents indicating they had attended one or more of the six survey items relating to attendance. Similarly, ‘participation’ in the previous 12 months was calculated based on respondents indicating they had participated in one or more of the five survey items relating to participation. A respondent was considered to be engaged in the arts in the previous 12 months (prevalence) if they had attended an arts event, and/or participated in an arts event or activity, and/or took part in arts related learning, and/or worked or volunteered in the arts (on a non-professional basis) and/or had been a member of an arts organization, club or society. ‘Total days engaged in the arts in the previous 12 months’ was calculated by summing together the number of days respondents had spent attending, participating, learning, working/volunteering or being a member of an arts organization, club or society. ‘Hours per day engaged in the arts in the previous 12 months’, was calculated by first multiplying hours on a typical day by number of days engaged in each type of arts activity over the last 12 months, this was then summed and the total divided by the sum of days engaged in each type of arts activity. ‘Hours per year engaged in the arts’, was calculated by first multiplying hours on a typical day by number of days engaged in each type of arts activity in the previous 12 months and summing each sub-total together. As respondent data showed a skewed distribution ‘hours per year engaged in the arts’ was grouped by quartiles i.e. no art (0 hours/year), low arts engagement (0.1 to 22.9 hours/year), medium arts engagement (23 to 99.9 hours/year) and high arts engagement (100 or more hours/year). This was followed by linear regression analyses to investigate the association between arts engagement and WEMWBS scores. Overall, three models were fitted. The first model estimated the direct (unadjusted) effect of arts engagement; the second estimated the effect of arts engagement after adjustment for demographics (i.e. age, sex, location, income, education, marital status and children); the third adjusted for demographics, general health, engagement in sport, religious events/activities and holidays from work. With the exception of the effect modification analyses, results were assessed at the 0.05 level of significance. Effect modification was assessed at the 0.01 level of significance to avoid a finding due to chance. The data were analysed using SPSS for Windows (Version 21) and SAS for Windows (Version 9.3).
3.5 SECONDARY ANALYSIS OF HEALTHWAY DATA

3.5.1 Healthway’s survey of community recreation and health

With permission from Healthway, a secondary analysis of the 2006 survey of Community Recreation and Health was conducted to evaluate the effectiveness of a Health in Arts approach by assessing the viability of the arts to promote health messages to the general population.

3.5.1.1 Design, recruitment and sampling

The Healthway Survey of Community Recreation and Health is a cross-sectional telephone survey of the Western Australian general population (i.e. adults and competent minors, 16 to 69 years). A competent minor is considered to be a person aged 16 or 17 years. An upper limit of 69 years is applied in recognition of the heavy content of the survey with respect to activities more relevant to young to middle-aged people.[102] The survey is representative of the Western Australian population in terms of gender (50% males, 50% females) and location (70% metropolitan; 30% rural). Keeping in mind these sampling quotas, residential telephone numbers were randomly selected from the Australian Electronic White Pages telephone directory. To increase the likelihood of a representative distribution of respondents, once contacted, the adult in the household who would next be celebrating a birthday was invited to participate in the study. Telephone interviews were only conducted on weekends and after 4.00pm on weekdays with up to three attempts at contact (initial attempt plus two call-backs on a separate day). The survey of Community Recreation and Health is run every four years and informs Healthway’s strategic decisions.

3.5.1.2 Survey and data collection

In October 2006, a series of telephone interviews were conducted with members of the Western Australian general population. The survey contained 107 questions, took approximately 25 minutes to complete. Survey topics included:[79]

- involvement in sport, arts, racing, outdoor recreation clubs or indoor recreation clubs,
- awareness of Healthway and support for health policy and regulations,
- health message awareness,
- health behaviours, social capital, mental health, and
• demographics.

3.5.1.3 Dependent variable

The dependent variable in this secondary analysis was unprompted health message awareness. Respondents were asked to recall “what health slogans or messages, if any, come to mind when I say smoking”.\[103] The same message awareness question was then asked again but the word smoking was replaced with the word alcohol, and then physical activity, nutrition, and sun protection. Binary variables (aware/not aware) relating to promoted message type was calculated. Unprompted message awareness was chosen over prompted message awareness, as it was considered to be a more sensitive measure.

3.5.1.4 Independent variable

The independent variable in this study was engagement in the arts. Specifically, whether or not the respondent had engaged in the arts in the last 12 months (yes/no). Determining engagement by asking specific questions about arts activities over the last 12 months is common in the literature.[36, 99] In this study, respondents were considered to be engaged in the arts if in the last 12 months they had been a member of an arts organisation, and/or had attended an arts event as part of an audience, and/or personally participated in an arts activity.

3.5.1.5 Data analysis

The data were analysed using SAS for Windows (Version 9.1). The analysis strategy comprised an initial descriptive analysis of message awareness for those engaged and not engaged in the arts, and comparison via a chi-square statistic, of the confounding variables (gender, age group, location, income, and sports engagement) for those engaged and not engaged in the arts. This was followed by a logistic regression analysis to investigate the association between arts engagement and message awareness after adjustment for confounding variables. Awareness of each type of health message was analysed separately. Three models were fitted for each message, the first estimated the direct (unadjusted) effect of arts engagement; the second estimated the effect of arts engagement after adjustment for gender, age, income and location; the third model also adjusted for sports engagement. The effect is presented as the estimated odds ratio (OR) and its associated p-value.
3.5.2 Healthway’s sponsorship monitor survey

With permission from Healthway, a secondary analysis of their 2004-2009 Sponsorship Monitor data was conducted. The objective of this analysis was to evaluate the cognitive impact (message awareness, comprehension, acceptance and intention) of promoting anti-smoking messages at arts events to the general population, and to compare findings to sports events, a more traditional health promotion setting.

3.5.2.1 Design, recruitment and sampling

The aim of the sponsorship monitor is to ascertain the overall effectiveness of Healthway’s sponsorship program by evaluating a selection of projects which receive a sponsorship of AUD$25,000 or more.[102] Between 2004 and 2009, 12 arts events (i.e. visual arts, performing arts, festivals, n=592 respondents) and 9 sports events (hockey, netball, car racing, n=420 respondents) that promoted a single anti-smoking message (e.g. Quit, Smoke free or Smarter than Smoking) were evaluated. At each event, a cross-section of approximately 50 Western Australian adults, aged 15 years and over, were selected at random to participate. Participants were approached by trained survey staff in an interval/break or at the end of a performance/game. Participants attended their respective event as a spectator or as part of an audience.

3.5.2.2 Survey and data collection

The survey was self-administered, paper-based and contained 24 questions. The survey took 5-10 minutes to complete. The survey asked cognitive impact, health behaviour and demographic questions. With regard to cognitive impact, participants were asked whether they recalled seeing or hearing any health messages at the event (i.e. awareness). Respondents who were aware of an anti-smoking message were asked what they thought the message meant and if they agreed with the message (i.e. comprehension and acceptance). Respondents were then asked if the anti-smoking message had caused them to think about doing something related to the message (i.e. intention). The question about message acceptance asked for a yes/no response, while the comprehension question was open-ended and later coded as correct/incorrect. The awareness and intention questions also asked for a yes/no response and if ‘yes’, asked respondents to specify which message(s) they saw or heard (awareness) and what they intended to do (intention). It should be noted that intentions included anti-
smoking outcomes related to the respondent and to encouraging others to adopt or continue a non-smoking behaviour.

3.5.2.3 Dependent variable
The dependent variable in this secondary analysis was cognitive impact (message awareness, comprehension, acceptance and intention).

3.5.2.4 Independent variable
The independent variable in this study was event type (i.e. art or sports event).

3.5.2.5 Data analysis
The data were analysed using SPSS for Windows (Version 17) and SAS Statistical Software (Version 9.3). The analysis first involved a descriptive investigation of the demographic, health behaviour, and cognitive impact data followed by a chi square analysis to test for differences by arts and sports events. Two logistic regression models were then fitted for each cognitive impact variable to compare the impact of anti-smoking messages at arts events and sports events. The first model estimated the direct (unadjusted) arts vs sports odds ratio comparing the cognitive impact of anti-smoking messages; the second model estimated the arts vs sports odds ratio after adjustment for age, gender, data collection year and smoking status. As evidence of an intra-cluster correlation within event was found for awareness (r=0.14), but not for other levels of cognitive impact, clustering was taken into account for this variable.

3.6 CONCLUSION
This chapter provided an overview of the methods used in the studies conducted during the course of this PhD. As mentioned previously, as this is a thesis by publications, the five chapters that follow are presented as manuscripts. The first manuscript defines arts engagement for population based research (Chapter 4). The second manuscript presents a health-arts conceptual framework for guiding research and practice (Chapter 5). The third manuscript measures the prevalence of arts engagement and then quantifies the relationship between arts engagement and mental wellbeing in the general population (Chapter 6). The fourth and fifth manuscripts assess the effectiveness and viability of the arts as a health promotion setting (Chapter 7 and 8). Finally, Chapter 9 summarises the main findings of this research including the implications for policy, practice and research.
**Title:** Untitled

Acrylic on canvas (60cm x 80cm)

This painting was created by the candidate during the course of the PhD
Chapter 4
Defining arts engagement for population based research
Chapter 4: DEFINING ARTS ENGAGEMENT FOR POPULATION BASED RESEARCH

4.0 PREFACE

This chapter describes the development of a definition of arts engagement for population based research. The definition was created via an international survey of experts. This chapter describes the aims of the research, method, analysis, results and discussion. This chapter was published in 2012 in ‘Arts & Health: An International Journal for Research, Policy and Practice’ (Figure 4.1). The chapter is presented as it appears in the journal on the date of publication.

Figure 4.1: Davies C et al (2012). Defining arts engagement for population-based health research: Art forms, activities and level of engagement. Arts & Health 4(3): 203-216.
4.1 ABSTRACT

**Background:** The arts and health evidence base needs to be grounded by common terminology and concepts from which original research and comparative studies can be developed. The aim of this study was to elucidate terminology central to understanding the arts and health causal pathway by defining arts engagement via art forms, activities and level (magnitude) of engagement.

**Method:** The study design was cross-sectional. International experts (n=280) completed an online survey about the concept of arts engagement (response fraction 44%) to generate a list of art forms and activities. Responses were analysed using NVivo. Participating experts then completed a second survey to rate activities by level of engagement (response fraction 57%). Ratings were analysed via descriptive statistics and factor analysis.

**Results:** Arts engagement can be defined by five art forms (1. performing arts; 2. visual arts, design and craft; 3. community/cultural festivals, fairs and events; 4. literature; and 5. online, digital and electronic arts) and measured via 91 activities. ‘Active’ arts activities had higher levels of engagement than ‘passive’ activities.

**Conclusion:** Study findings provide guidance about which art forms and activities should be included in population surveys and provide a measurement of exposure for use in studies investigating the relationship between arts engagement and health.

**Keywords:** Arts engagement, definition, population, health, arts activities

4.2 BACKGROUND

Engaging in the arts can have a positive effect on wellbeing by encouraging self-understanding, expression, confidence, good self-esteem and interpersonal communication.[1-3] Arts engagement has also been associated with skills such as problem-solving, invention, novel thinking, innovation and is an essential part of what keeps us connected with the self and others.[2, 52, 61] Although there are many examples of good practice and therapeutic uses for the arts, to date, most published arts or arts-health studies involve small numbers of participants or clinical populations rather than the general population. Where arts engagement studies have been conducted at a population level, research definitions are often inconsistent and vary considerably by art form and the types of activities used to identify people as engaged or not engaged in the arts.[31]
A scientific approach to research is vital if we are to move the arts and health debate beyond anecdote and opinion.[6] An important part of this scientific approach is to elucidate key terminology and concepts. The establishment of common terminology and concepts means that we can design comparative population based studies from which a strong arts and health evidence base can be developed.[34] This paper explores the definition of arts engagement in terms of art forms, a comprehensive list of current and emerging activities and quantifies each activity by magnitude or level of arts engagement.

4.2.1 Defining Arts Engagement

According to Dutton (2006), what the philosophy of the arts needs is an approach that treats arts engagement as a field of activities including its most problematic outliers.[33] For reasons of validity (e.g. content, consensual and criterion), research questions about arts involvement need to be comprehensive so as to adequately measure engagement. For reasons of study reliability, the way researchers define arts engagement needs to be precise, consistent and objective. From a population perspective, the prevalence of arts engagement needs to be measured via a well-defined list of arts activities so that trends over time and demographic patterns can be accurately evaluated. When looking at the association between arts engagement and health, the definition of arts engagement needs to be robust enough to allow people to be categorised as engaged or not engaged in the arts and also enable the quantification of their level of engagement. Studies that are able to demonstrate an increased health benefit in association with an increased level of arts engagement will provide convincing evidence of a causal link between the arts and health.

A review of the literature provides insight into the parameters that are important for a comprehensive definition of arts engagement for population based health research. The Australia Council for the Arts act defines arts engagement as creative and interpretative expression through theatre, literature, music, visual arts, film and crafts [35]. Conceptually, the method of defining arts engagement via a list of art forms is useful providing its formulation allows for new and emerging arts activities. In a recent study, the Australia Council for the Arts defined arts engagement via the visual arts
and craft, music, dance, theatre and literature with consideration given to engagement via creative participation or receptive attendance.[14] This description is valuable as it emphasises the importance of defining arts engagement in terms of art forms and also highlights the importance of level of engagement (i.e. whether a person is actively making and creating art compared to receptively observing or listening to the arts).

Windsor (2005), in a study of arts engagement and general health in England, divided arts engagement into participation and attendance and rated engagement in terms of a list of 41 arts activities.[36]. Participation was defined in terms of creative activities (e.g. painting), sociable activities (e.g. singing to an audience) and physically demanding activities (e.g. dance).[36] Attendance was defined in terms of being present at a performing arts event (e.g. play or drama, musical, cultural festival) or non-performing arts/cultural event (e.g. a film at a cinema, library, art gallery).[36] This broad list of activities, as well as the distinction between participating in an arts activity as compared with viewing or listening to the activity is useful. However, the way activities were categorized may be seen as debatable as both the visual arts and literature, which are normally considered to be art forms in their own right, were merged into the non-performing arts/culture category.

In 2009, The National Endowment for the Arts (NEA) in the United States of America collected and analysed information about engagement in arts activities and leisure activities.[104] The arts were defined in terms of attending benchmark activities (e.g. jazz, musicals, ballet); visits to art museums/galleries, art/craft fairs, festivals, parks and historic sites; performing or creating art; reading literature and watching or listening to art via electronic media. Leisure activities included movies, sports, gardening, volunteering, charity work and community activities. This definition of arts engagement describes the arts in terms of activities and makes the distinction between arts activities and the ‘other types’ of activities that people take part in. The need for a consistent definition of arts engagement is highlighted here, as if we compare the NEA definition of arts engagement to the previous definitions discussed, movies were included as part of the arts whereas the NEA classified movies as a leisure activity.
The aim of this study was to identify current art forms and activities that could be used in a definition of arts engagement for population based health research via a scientific approach. The aim was to comprehensively list various types of arts activities and once identified, quantify these activities in terms of the amount of arts engagement experienced by a person when they take part in these activities. A comprehensive list of activities was considered necessary so that future studies would have guidance about how to define arts engagement and give direction as to which activities researchers should measure when calculating a prevalence of arts engagement. As it is plausible that arts-related wellbeing outcomes are influenced by level of engagement in an arts activity, the development of an arts weighting for each activity was considered useful. It was envisioned that this measure would provide future studies with a means of quantifying arts engagement and hence facilitate a possible dose-response relationship with health and wellbeing outcomes.

4.3 METHOD

It was recognised that in order to understand the various art forms and activities it was necessary to gather the views of a broad group of experts in the field of the arts and arts-health. In this way, our definition of arts engagement could be guided by their views, knowledge and informed opinion. This cross sectional study comprised two parts. First, an online survey of experts was conducted to explore the concept of arts engagement and to generate a comprehensive list of art forms and activities (survey one). A second follow-up survey of participating experts was then conducted to rate the activities generated from survey one, in terms of the amount of arts engagement experienced when a person takes part in these activities (survey two). Online surveys were conducted as they could be personalised to the respondent, were cost effective to send to experts around the world, excluded the need for data entry and provided experts with easy (real-time) access to the survey irrespective of location.

4.3.1 Recruitment and sampling

A list of 280 international experts in the field of the arts or arts-health was compiled by obtaining the names and contact email addresses from various arts databases and websites (e.g. journals, reports, arts organisation, government departments, universities). A person was considered to be an expert if they met at least one of the
following criteria: they had published an article in a refereed arts or arts-health journal; had written a published arts or arts-health report; were an arts or arts-health academic or were a director, manager, administrator or curator of a major arts organisation. A total of 280 experts (with email addresses) were identified and invited to participate in survey one in November 2009. Of the 123 experts who responded to survey one, 100 were still contactable via the same email address in May 2010 and were invited to participate in the second survey. A total of 57 experts completed the second survey. For both surveys, non-respondents were sent up to two reminder emails.

4.3.2 Survey instruments

Survey one: The terminology and content of online survey one was pilot tested by a panel of ten experts in the field of the arts, arts-health, health or evaluation. The survey took approximately ten minutes to complete and contained demographic items as well as questions about the concept of arts engagement. Specifically, respondents were asked, ‘When you think about the concept of arts engagement what words come to mind?’ and ‘Please list the types of activities or events related to your field of expertise that you consider to be examples of arts engagement’. Survey one respondents were asked to provide examples with enough detail to enable the creation of a list of typical arts engagement activities. Respondents were asked to specify both the type of activity (e.g. painting) and the method of engagement (e.g. create, make, design, view). Up to 15 activities were recorded per respondent.

Survey two: The terminology and content of online survey two was pilot tested by the same panel of ten experts who reviewed survey one. Respondents were asked to rate a list of 108 activities in terms of the ‘amount of arts engagement’ experienced by a person when they take part in these activities. The list of activities included the arts activities generated from survey one, and for comparison purposes, other activities that could also potentially have a positive effect on health and wellbeing (e.g. sports engagement, holidays, attending religious events). The list generated from survey one, also contained some contentious arts activities such as watching television or viewing a movie and newer art forms/activities relating to the field of online, digital and electronic arts. The ten point rating scale used in survey two ranged from zero to nine.
where ‘1’ represented a low level of arts engagement and ‘9’ represented a high level of arts engagement. Alternatively, respondents could decide that the listed activity was not an arts activity and in this case, the activity was given a rating of zero. Survey two took approximately twenty minutes to complete.

4.3.4 Ethics

Permission to undertake this study was granted by The University of Western Australia Human Research Ethics Committee.

4.4 RESULTS

Survey one was completed by 123 experts, a response fraction of 44% (123 respondents/280 possible participants). Survey two was completed by 57 experts, a response fraction of 57% (57 respondents/100 possible participants). The original sample plus the demographic profile of respondents to survey one and two is shown in Table 4.1. For both surveys, two thirds of respondents were female and the majority were aged forty years or over (71%). Respondents were located in Australia, Europe, the USA and Canada and had expertise in a variety of art forms.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Level</th>
<th>Original Sample % (n=280)</th>
<th>Survey 1 % (n=123)</th>
<th>Survey 2 % (n=57)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>Arts</td>
<td>79.3</td>
<td>63.4</td>
<td>64.9</td>
</tr>
<tr>
<td></td>
<td>Arts and Health</td>
<td>20.7</td>
<td>36.6</td>
<td>35.1</td>
</tr>
<tr>
<td>Gender</td>
<td>Male</td>
<td>45.8</td>
<td>33.1</td>
<td>36.4</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>54.2</td>
<td>66.9</td>
<td>63.6</td>
</tr>
<tr>
<td>Age Group</td>
<td>29 years or less</td>
<td>11.1</td>
<td>11.1</td>
<td>14.6</td>
</tr>
<tr>
<td></td>
<td>30 to 39</td>
<td>21.2</td>
<td>21.2</td>
<td>14.6</td>
</tr>
<tr>
<td></td>
<td>40 to 49</td>
<td>24.2</td>
<td>24.2</td>
<td>20.8</td>
</tr>
<tr>
<td></td>
<td>50 to 59</td>
<td>33.3</td>
<td>33.3</td>
<td>39.6</td>
</tr>
<tr>
<td></td>
<td>60 years or over</td>
<td>10.1</td>
<td>10.1</td>
<td>10.4</td>
</tr>
<tr>
<td>Location</td>
<td>Australia</td>
<td>80.0</td>
<td>87.0</td>
<td>89.5</td>
</tr>
<tr>
<td></td>
<td>Europe (including the United Kingdom)</td>
<td>10.4</td>
<td>9.8</td>
<td>7.0</td>
</tr>
<tr>
<td></td>
<td>USA / Canada</td>
<td>9.6</td>
<td>3.2</td>
<td>3.5</td>
</tr>
<tr>
<td>Art form</td>
<td>Performing arts</td>
<td>20.7</td>
<td>20.3</td>
<td>17.5</td>
</tr>
<tr>
<td></td>
<td>Visual arts, design and craft</td>
<td>32.5</td>
<td>21.1</td>
<td>22.8</td>
</tr>
<tr>
<td></td>
<td>Literature</td>
<td>3.2</td>
<td>1.6</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>Community and cultural festivals, fairs and events</td>
<td>7.1</td>
<td>7.3</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td>Health specific</td>
<td>19.3</td>
<td>34.1</td>
<td>36.8</td>
</tr>
<tr>
<td></td>
<td>Multi-disciplinary</td>
<td>17.1</td>
<td>15.5</td>
<td>19.3</td>
</tr>
</tbody>
</table>
4.3.3 Analysis
The results of survey one and two were analysed using SPSS for Windows (version 17) and NVivo (version 8). First, the 659 examples of arts engagement activities generated by survey one experts were coded thematically by art form and activity. Identified art forms and activities were then verified via a word frequency query in NVivo. Second, a descriptive analysis of survey two ratings was conducted to generate measures of central tendency (i.e. medians and means) and variation (i.e. standard deviation). Finally, a principal factor analysis with a Varimax rotation was performed to assess if there were any underlying patterns or constructs in the way respondents rated the activities. A two factor model was chosen because the first two factors accounted for the majority of the variance (eigenvalue A= 32.7, eigenvalue P=18.7). A factor loading cut off of 0.55 was employed.

4.4.1 Art forms
As guided by the literature,[14, 35, 36, 104] five specific art forms were identified from respondents comments (Figure 4.2), these being:

- The performing arts (e.g. activities in the genre of music, sound art, dance, theatre, singing, film, etc.);
- The visual arts, design and craft (e.g. activities in the genre of animation, craft, drawing, fashion, interior design, jewellery, woodwork, metalwork, painting, photography, ceramics, public art, sculpture, textiles, etc.);

Figure 4.2: Arts engagement art forms.
• Literature (e.g. activities such as writing, reading etc.);
• Online, digital and electronic arts (e.g. activities relating to arts websites, blogs, the creation of digital artworks etc.); and
• Community and cultural festivals, fairs and events.

4.4.2 Arts activities and level of engagement

Of the 108 activities rated by the experts, 91 activities were given an arts engagement rating between one and nine, while 17 activities were designated as non-arts activities and received a median rating of zero. The activities considered to be non-arts activities were:

• Travelling to an arts event or venue (e.g. by car, bus, train, walking),
• Viewing websites to obtain general information,
• Gardening at home,
• Cooking at home,
• Visiting an aquarium,
• Going on holiday,
• Attending a religious event, activity or place of worship,
• Attending a night club or bar to socialise and have fun,
• Being a member of a sports organisation, society or club,
• Sports related philanthropy,
• Watching sport on television,
• Participating in sports related voluntary work,
• Participating in a game of sport,
• Attending a live sports event as a spectator,
• Online ‘chatting’ via social networking sites or chat rooms,
• Putting on makeup (e.g. before going to work, dinner etc.), and
• Attending a family gathering.

The principal factor analysis showed two dominant factors. The first factor contained ‘active’ arts engagement activities that related to behaviours such as making, creating, writing and teaching art (Table 4.2). The second factor comprised more ‘passive’ engagement activities that involved behaviours such as visiting, attending, listening,
viewing, watching and discussing art (Table 4.3). The median engagement rating for active arts activities was eight, while the median rating for passive arts activities was six. Overall, 16 of the 91 arts activities did not load sufficiently on either the active or passive factor (Table 4.4). As factor loadings are the correlations between the original activity variable and factors, these sixteen activities did not correlate well with the active factor or the passive factor and thus may relate to other dimensions of arts engagement not captured by these two dominant factors. The 91 arts activities listed in Tables 4.2-4.4 were ordered by art form and from highest to lowest by median rating. Overall, professional arts participation or attending professional events scored higher than amateur participation or attending amateur events. Within the art form of the performing arts, respondents made a distinction between watching an arts house film at a cinema and watching a main stream film at a cinema (median = six versus four respectively). A rating distinction was also made by the experts in terms of television viewing. That is, watching an arts related show, film or documentary on television was seen to impart a higher level of arts engagement than watching a main stream show, film or documentary (median = six versus three respectively).

Table 4.2: Level of engagement for ‘active’ arts activities.

<table>
<thead>
<tr>
<th>Activity</th>
<th>n</th>
<th>Median</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performing arts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participating in a live performing arts performance as a professional artist (i.e. actor, dancer, musician or singer)</td>
<td>57</td>
<td>9</td>
<td>7.7</td>
<td>2.9</td>
</tr>
<tr>
<td>Participating in a performing arts rehearsal to practice for a performance</td>
<td>56</td>
<td>9</td>
<td>7.4</td>
<td>2.6</td>
</tr>
<tr>
<td>Participating, as a professional artist, in a performing arts class, workshop or training program to learn or improve skills</td>
<td>57</td>
<td>9</td>
<td>7.4</td>
<td>3.0</td>
</tr>
<tr>
<td>Jamming, composing, recording, mixing music/songs as a professional artist</td>
<td>57</td>
<td>9</td>
<td>7.4</td>
<td>2.9</td>
</tr>
<tr>
<td>Writing a script for a film or play/theatre production</td>
<td>57</td>
<td>9</td>
<td>7.3</td>
<td>3.0</td>
</tr>
<tr>
<td>Directing, producing, choreographing or editing a performing arts film, production or performance</td>
<td>56</td>
<td>9</td>
<td>7.6</td>
<td>2.6</td>
</tr>
<tr>
<td>Participating in a live performing arts performance as an amateur artist (i.e. amateur actor, dancer, musician or singer)</td>
<td>57</td>
<td>8</td>
<td>7.1</td>
<td>2.8</td>
</tr>
<tr>
<td>Participating, as an amateur artist or member of the public, in a performing arts class, workshop or training program to learn or improve skills (e.g. dancing lessons, learning an instrument, singing etc.)</td>
<td>57</td>
<td>8</td>
<td>7.1</td>
<td>2.7</td>
</tr>
<tr>
<td>Jamming, composing, recording, mixing music/songs as an amateur artist</td>
<td>57</td>
<td>8</td>
<td>7.0</td>
<td>2.8</td>
</tr>
<tr>
<td>Teaching or facilitating a performing arts class, workshop, training program</td>
<td>57</td>
<td>8</td>
<td>7.0</td>
<td>2.6</td>
</tr>
<tr>
<td>Participating in a performing arts event as a stage hand, technician, assistant etc.</td>
<td>57</td>
<td>7</td>
<td>5.9</td>
<td>3.2</td>
</tr>
<tr>
<td>DJ-ing at a performing arts event</td>
<td>57</td>
<td>7</td>
<td>5.7</td>
<td>3.0</td>
</tr>
<tr>
<td>Making or designing the costumes, sets, lighting or backdrops for a performing arts event</td>
<td>57</td>
<td>7</td>
<td>6.4</td>
<td>2.9</td>
</tr>
<tr>
<td>Participating in the various performing arts activities or events for self-enjoyment, relaxation or self-reflection (e.g. dancing, learning an instrument, jamming, singing)</td>
<td>57</td>
<td>7</td>
<td>6.5</td>
<td>2.6</td>
</tr>
<tr>
<td>Activity</td>
<td>n</td>
<td>Median</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>----</td>
<td>--------</td>
<td>-------</td>
<td>-----</td>
</tr>
<tr>
<td>Attending an amateur performing arts concert as part of an audience e.g. at a school, community centre etc.</td>
<td>57</td>
<td>6</td>
<td>5.5</td>
<td>2.5</td>
</tr>
<tr>
<td>Busking in a shopping mall, park, city street, festival etc.</td>
<td>57</td>
<td>6</td>
<td>5.7</td>
<td>2.9</td>
</tr>
<tr>
<td><strong>Visual arts, design and craft</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creating or designing public/urban art for a public space (includes sculptures, paintings, murals etc.)</td>
<td>55</td>
<td>9</td>
<td>7.5</td>
<td>2.6</td>
</tr>
<tr>
<td>Creating or designing a visual arts/design/craft artwork, as a professional artist, for an exhibition or as a commission etc.</td>
<td>54</td>
<td>9</td>
<td>7.9</td>
<td>2.4</td>
</tr>
<tr>
<td>Creating or designing a visual arts/design/craft artwork, as a professional artist, for self-enjoyment, relaxation, self-reflection etc.</td>
<td>55</td>
<td>9</td>
<td>7.7</td>
<td>2.4</td>
</tr>
<tr>
<td>Participating, as a professional artist, in a visual arts/design/craft class, workshop or training program to learn or improve skills</td>
<td>54</td>
<td>9</td>
<td>7.6</td>
<td>2.5</td>
</tr>
<tr>
<td>Creating or designing a visual arts/design/craft artwork, as an amateur artist or member of the public, for an exhibition, as a commission etc.</td>
<td>55</td>
<td>8</td>
<td>7.2</td>
<td>2.5</td>
</tr>
<tr>
<td>Creating or designing a visual arts/design/craft artwork, as an amateur artist or member of the public, for self-enjoyment, relaxation, self-reflection etc.</td>
<td>55</td>
<td>8</td>
<td>7.0</td>
<td>2.7</td>
</tr>
<tr>
<td>Participating, as an amateur artist or member of the public, in a visual arts/design/craft class, workshop or training program to learn or improve skills (e.g. painting lessons, knitting groups, craft groups etc.)</td>
<td>56</td>
<td>8</td>
<td>6.6</td>
<td>2.9</td>
</tr>
<tr>
<td>Teaching or facilitating a visual arts/design/craft class, workshop, training program</td>
<td>56</td>
<td>8</td>
<td>7.5</td>
<td>2.1</td>
</tr>
<tr>
<td>Participating in the various visual arts/design/craft activities or events for self-enjoyment, relaxation, self-reflection</td>
<td>56</td>
<td>8</td>
<td>6.9</td>
<td>2.5</td>
</tr>
<tr>
<td><strong>Literature</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Writing a book, poetry, essay, short story etc. as a professional author</td>
<td>56</td>
<td>9</td>
<td>7.8</td>
<td>2.6</td>
</tr>
<tr>
<td>Writing a book, poetry, essay, short story etc. as an amateur author or member of the public</td>
<td>56</td>
<td>8</td>
<td>7.2</td>
<td>2.5</td>
</tr>
<tr>
<td>Teaching or facilitating a literary arts class, workshop or training program</td>
<td>56</td>
<td>8</td>
<td>7.5</td>
<td>2.2</td>
</tr>
<tr>
<td>Participating, as a professional author, in a literary arts class, workshop or training program to learn or improve skills</td>
<td>56</td>
<td>8</td>
<td>7.5</td>
<td>2.4</td>
</tr>
<tr>
<td>Participating, as an amateur author or member of the public, in a literary arts class, workshop or training program to learn or improve skills</td>
<td>56</td>
<td>7</td>
<td>6.6</td>
<td>2.7</td>
</tr>
<tr>
<td>Participating in the various literary arts activities or events for self-enjoyment, relaxation, self-reflection</td>
<td>56</td>
<td>7</td>
<td>6.4</td>
<td>2.5</td>
</tr>
<tr>
<td><strong>Online, digital and electronic arts</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Making an electronic, digital or online artwork, animation, video, film, music recording etc.</td>
<td>55</td>
<td>9</td>
<td>7.2</td>
<td>2.7</td>
</tr>
<tr>
<td>Writing a digital story or blog</td>
<td>54</td>
<td>6</td>
<td>5.2</td>
<td>3.2</td>
</tr>
<tr>
<td>Completing online arts tutorials to learn about the arts or to obtain a skill</td>
<td>55</td>
<td>5</td>
<td>5.0</td>
<td>2.6</td>
</tr>
<tr>
<td><strong>Community and cultural festivals, fairs and events</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participating in a community festival/fair as a professional artist, performer, musician etc.</td>
<td>54</td>
<td>8</td>
<td>7.1</td>
<td>2.6</td>
</tr>
<tr>
<td>Making artworks for a community event or procession e.g. lanterns</td>
<td>54</td>
<td>7</td>
<td>5.8</td>
<td>3.1</td>
</tr>
<tr>
<td>Participating in a community festival/fair as an amateur artist, performer, musician etc. or member of the general public</td>
<td>54</td>
<td>7</td>
<td>6.5</td>
<td>2.7</td>
</tr>
<tr>
<td>Participating in a cultural performance, traditional welcome, parade or ceremony</td>
<td>54</td>
<td>7</td>
<td>5.9</td>
<td>2.9</td>
</tr>
<tr>
<td>Participating in a community arts workshop to create murals, mosaic etc.</td>
<td>54</td>
<td>7</td>
<td>6.4</td>
<td>2.8</td>
</tr>
<tr>
<td>Teaching or facilitating a community arts class, workshop or training program</td>
<td>54</td>
<td>7</td>
<td>6.6</td>
<td>2.8</td>
</tr>
<tr>
<td>Participating in the various community/cultural festivals, fairs or events for self-enjoyment, relaxation or self-reflection</td>
<td>53</td>
<td>6</td>
<td>5.6</td>
<td>2.7</td>
</tr>
<tr>
<td><strong>Multi art form</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working in the arts as an artist</td>
<td>55</td>
<td>9</td>
<td>8.2</td>
<td>1.9</td>
</tr>
<tr>
<td>Teaching or facilitating an arts class, workshop or training program to improve or promote wellbeing/health</td>
<td>55</td>
<td>7</td>
<td>6.2</td>
<td>3.0</td>
</tr>
<tr>
<td>Making works of art as part of a workshop or therapy session to improve wellbeing/health (e.g. in a community, hospital or health care setting)</td>
<td>55</td>
<td>6</td>
<td>5.7</td>
<td>2.9</td>
</tr>
</tbody>
</table>
Table 4.2: Level of engagement for ‘active’ arts activities continued.

<table>
<thead>
<tr>
<th>Activity</th>
<th>n</th>
<th>Median</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Making works of art, banners, posters etc. as part of a workshop to promote wellbeing/health e.g. fruit sculptures to promote healthy eating.</td>
<td>55</td>
<td>6</td>
<td>5.0</td>
<td>3.2</td>
</tr>
<tr>
<td>Participating in an arts project/workshop as a result of a referral or “arts prescription” as practised in the United Kingdom.</td>
<td>55</td>
<td>6</td>
<td>5.8</td>
<td>2.9</td>
</tr>
<tr>
<td>Participating in arts related competitions.</td>
<td>53</td>
<td>5</td>
<td>5.6</td>
<td>2.7</td>
</tr>
</tbody>
</table>

Table 4.3: Level of engagement for ‘passive’ arts activities.

<table>
<thead>
<tr>
<th>Activity</th>
<th>n</th>
<th>Median</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Performing arts</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watching an arts related show, film or documentary on the television.</td>
<td>57</td>
<td>6</td>
<td>5.3</td>
<td>2.3</td>
</tr>
<tr>
<td>Listening to a recording of the performing arts (e.g. music, singing) via a CD player, radio, web stream, i-pod etc.</td>
<td>57</td>
<td>5</td>
<td>5.1</td>
<td>2.5</td>
</tr>
<tr>
<td><strong>Visual arts, design and craft</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attending a professional visual arts/design/craft exhibition as part of an audience or spectator e.g. art gallery etc.</td>
<td>56</td>
<td>7</td>
<td>6.8</td>
<td>2.2</td>
</tr>
<tr>
<td>Attending an amateur visual arts/design/craft exhibition as part of an audience or spectator e.g. a school, community centre etc.</td>
<td>56</td>
<td>6</td>
<td>5.6</td>
<td>2.5</td>
</tr>
<tr>
<td>Collecting/buying original works of art e.g. paintings, sculpture etc.</td>
<td>56</td>
<td>6</td>
<td>5.9</td>
<td>2.3</td>
</tr>
<tr>
<td>Viewing public/urban art in a public space.</td>
<td>56</td>
<td>5</td>
<td>5.5</td>
<td>2.6</td>
</tr>
<tr>
<td><strong>Literature</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading about the arts, art history, art theory etc. in an arts related book, journal, essay, online etc.</td>
<td>56</td>
<td>7</td>
<td>6.1</td>
<td>2.3</td>
</tr>
<tr>
<td>Attending a book reading, book launch or author’s talk.</td>
<td>56</td>
<td>6</td>
<td>5.4</td>
<td>2.4</td>
</tr>
<tr>
<td>Discussing a book, poetry, essay, short story etc. as part of a book club or reading group.</td>
<td>56</td>
<td>6</td>
<td>5.6</td>
<td>2.6</td>
</tr>
<tr>
<td>Buying a paperback, hard cover or electronic book in a store or online.</td>
<td>55</td>
<td>5</td>
<td>4.0</td>
<td>2.8</td>
</tr>
<tr>
<td>Reading a book, poetry, essay, short story etc. for self-enjoyment, relaxation, self-reflection etc.</td>
<td>56</td>
<td>5</td>
<td>5.5</td>
<td>2.4</td>
</tr>
<tr>
<td>Going to a library to borrow a book, CD, DVD etc.</td>
<td>56</td>
<td>4</td>
<td>3.8</td>
<td>2.9</td>
</tr>
<tr>
<td><strong>Online, digital and electronic arts</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Viewing or listening to a visual artwork, performance or literary work via a website, web stream, podcast etc.</td>
<td>55</td>
<td>5</td>
<td>5.2</td>
<td>2.4</td>
</tr>
<tr>
<td>Participating in an online forum after attending/participating in an arts event.</td>
<td>55</td>
<td>5</td>
<td>5.2</td>
<td>2.5</td>
</tr>
<tr>
<td>Participating in an online forum to obtain or share arts related information.</td>
<td>55</td>
<td>5</td>
<td>5.1</td>
<td>2.5</td>
</tr>
<tr>
<td><strong>Community and cultural festivals, fairs and events</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attending a community arts festival or fair.</td>
<td>54</td>
<td>6</td>
<td>5.0</td>
<td>2.5</td>
</tr>
<tr>
<td>Attending a cultural performance or ceremony.</td>
<td>54</td>
<td>6</td>
<td>5.7</td>
<td>2.6</td>
</tr>
<tr>
<td><strong>Multi art form</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conducting arts related research.</td>
<td>54</td>
<td>8</td>
<td>6.4</td>
<td>2.8</td>
</tr>
<tr>
<td>Visiting an artist studio.</td>
<td>55</td>
<td>7</td>
<td>6.1</td>
<td>2.6</td>
</tr>
<tr>
<td>Visiting an art gallery.</td>
<td>55</td>
<td>7</td>
<td>6.6</td>
<td>2.2</td>
</tr>
<tr>
<td>Working in the arts as an arts administrator, academic etc.</td>
<td>55</td>
<td>7</td>
<td>6.8</td>
<td>2.4</td>
</tr>
<tr>
<td>Being a member of an arts organisation, society, club etc.</td>
<td>54</td>
<td>7</td>
<td>5.9</td>
<td>2.6</td>
</tr>
<tr>
<td>Attending an artist talk or lecture.</td>
<td>54</td>
<td>7</td>
<td>6.4</td>
<td>2.1</td>
</tr>
<tr>
<td>Attending an arts related conference or symposium.</td>
<td>54</td>
<td>7</td>
<td>6.6</td>
<td>2.2</td>
</tr>
<tr>
<td>Visiting a museum.</td>
<td>54</td>
<td>6</td>
<td>5.8</td>
<td>2.6</td>
</tr>
<tr>
<td>Arts related philanthropy.</td>
<td>54</td>
<td>6</td>
<td>5.4</td>
<td>2.9</td>
</tr>
<tr>
<td>Attending an art market.</td>
<td>53</td>
<td>6</td>
<td>5.2</td>
<td>2.6</td>
</tr>
<tr>
<td>Attending an arts related charity event.</td>
<td>54</td>
<td>5</td>
<td>4.7</td>
<td>2.7</td>
</tr>
</tbody>
</table>

Table 4.4: Level of engagement for ‘other’ arts activities.

<table>
<thead>
<tr>
<th>Activity</th>
<th>n</th>
<th>Median</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Performing arts</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attending a professional performing arts performance or concert as part of an audience.</td>
<td>57</td>
<td>7</td>
<td>6.8</td>
<td>2.2</td>
</tr>
</tbody>
</table>
Table 4.4: Level of engagement for ‘other’ arts activities continued ...

<table>
<thead>
<tr>
<th>Activity</th>
<th>n</th>
<th>Median</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Watching an art house film at a cinema</td>
<td>57</td>
<td>6</td>
<td>5.7</td>
<td>2.2</td>
</tr>
<tr>
<td>Watching a recording of the performing arts (e.g. dance performance) via</td>
<td>56</td>
<td>5</td>
<td>4.7</td>
<td>2.4</td>
</tr>
<tr>
<td>a web stream, pod-cast, DVD etc.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watching buskers/street performers perform</td>
<td>57</td>
<td>4</td>
<td>3.9</td>
<td>2.7</td>
</tr>
<tr>
<td>Watching a main stream film at a cinema</td>
<td>56</td>
<td>4</td>
<td>3.7</td>
<td>2.5</td>
</tr>
<tr>
<td>Watching a main stream show, film or documentary on the television</td>
<td>57</td>
<td>3</td>
<td>3.7</td>
<td>2.5</td>
</tr>
<tr>
<td>Making a home movie with friends/family</td>
<td>57</td>
<td>3</td>
<td>3.6</td>
<td>2.8</td>
</tr>
<tr>
<td>Buying a performing arts related CD, DVD or MP3 in a store or online</td>
<td>57</td>
<td>3</td>
<td>3.5</td>
<td>2.7</td>
</tr>
<tr>
<td>Compiling a MP3 music play list</td>
<td>57</td>
<td>2</td>
<td>2.7</td>
<td>2.3</td>
</tr>
<tr>
<td>Online, digital and electronic arts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Viewing arts websites to obtain arts related information</td>
<td>52</td>
<td>6</td>
<td>5.7</td>
<td>2.2</td>
</tr>
<tr>
<td>Creating/designing a website</td>
<td>55</td>
<td>6</td>
<td>5.0</td>
<td>3.1</td>
</tr>
<tr>
<td>Participating in the various online/computer/electronic arts activities</td>
<td>55</td>
<td>5</td>
<td>4.9</td>
<td>2.7</td>
</tr>
<tr>
<td>or events for self-enjoyment, relaxation or self-reflection</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Downloading online movies, music, videos</td>
<td>55</td>
<td>1</td>
<td>1.5</td>
<td>1.7</td>
</tr>
<tr>
<td>Multi art form</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organising or managing arts related projects, events and performances</td>
<td>55</td>
<td>8</td>
<td>6.4</td>
<td>3.0</td>
</tr>
<tr>
<td>Completing formal arts training at a university, community college etc.</td>
<td>55</td>
<td>8</td>
<td>7.6</td>
<td>2.0</td>
</tr>
<tr>
<td>Participating in arts related voluntary work</td>
<td>54</td>
<td>6</td>
<td>5.9</td>
<td>2.4</td>
</tr>
</tbody>
</table>

4.5 DISCUSSION

A scientific approach is needed to elucidate key terminology and concepts that are central to understanding the relationship between the arts and health. Without proper parameters the concept of arts engagement cannot be validly and reliably measured and the association between arts engagement and health cannot be properly investigated. The objective therefore of this study was to clarify key terminology by developing a definition of arts engagement via current art forms, activities and level of engagement.

Overall, three of the five art forms suggested in this study (i.e., the performing arts; visual arts, design & craft and literature) were found to be similar to the art forms defined in the Australian Council for the Arts act.[35] Based on study findings, it was considered important to expand this definition to include “online, digital & electronic arts” and “community and cultural festivals, fairs & events”. Therefore, in this study, arts engagement was defined in terms of five art forms that operate independently but also collaborate, communicate and intersect in their arts practice.

Windsor (2005), defined arts engagement in terms of a list of 41 arts activities.[36] In this study, expert opinion resulted in the formation of a list of 91 arts activities. A
principal factor analysis was performed to assess if there were any underlying patterns or constructs in the way respondents rated the activities. Overall, 75 of the 91 arts activities were explained by two dominant underlying factors, these being active and passive engagement. In the literature, active and passive engagement is seen as two poles of the activity dimension, where active experience is mainly associated with ‘physical’ presence, and passive experience with a more ‘mental’ presence.[14, 105] Our findings suggest that regardless of art form, active arts activities (e.g. making, creating, writing) provide higher levels of engagement compared to more passive activities (e.g. visiting, attending, listening).

In general, professional artists were considered to be more engaged than amateur artists, possibly due to variation in arts related skill, knowledge, familiarity and understanding. On average, respondents also rated attending professional arts events higher than attending amateur arts events, which might reflect the expectation that professional arts events are more expertly crafted, performed by skilled artists and more artistically proficient than an amateur event. Although previous studies have acknowledged the use of online, digital or electronic media to access the arts,[36, 104] few have highlighted its importance as an art form in its own right. Ten activities relating to the emerging art form of online, digital and electronic arts were identified in this study. Making electronic, digital or online artworks were rated highly by the experts in terms of level of arts engagement. Writing a digital story, blog or creating a website was considered to impart a medium level of arts engagement as was viewing an arts related website to obtain arts information. Downloading movies, music and videos was considered by the experts to provide a low level of arts engagement.

Within the performing arts, respondents indicated that watching an arts house film imparted a higher level of engagement compared to watching a main stream film. Similarly, respondents rated watching an arts related show, film or documentary on television higher than watching a main stream show, film or documentary. This rating distinction indicates that when conducting arts surveys it may not be enough to ask respondents if they ‘attend the cinema’ or if they ‘watch television’, instead it is important to ask people what they watch and if the show, film or documentary directly relates to the arts.
Overall, 17 of the 108 rated in this study were defined as non-arts activities by the experts. Similar to the 2009 National Endowment for the Arts study, some of these items could be classified as social or leisure activities (e.g. online chatting via social networking sites, going on holiday, sport engagement, religious activities).[104] As these social or leisure activities could also have an impact on health and wellbeing, future population based studies should control for engagement in these activities to ensure that they do not confound or modify the effect of arts engagement on health.

To develop a definition of arts engagement, experts from a variety of art forms were consulted. As a result, the strengths of this study, were that our definition of arts engagement, were (1) guided by a scientific approach and (2) directed by the informed opinion of a group of experts. This however could also be seen as a limitation due to the subjective dimension of the identification and rating of arts engagement. Therefore, it is possible that if a different group of respondents were surveyed (e.g. the general public, arts students, hospital patients etc.), that a different list of art forms, activities and measures of engagement would have resulted. It is the authors’ opinion that the views of experts in the field of the arts or arts-health is a suitable place to start when defining the arts and that the appropriateness of the art forms, activities and measures of engagement provided in this study will be assessed once they are used in the context of arts and health research. Another limitation of this study was the level of non-response to the two online surveys. However, online surveys commonly achieve response fractions between 30% and 40%, therefore, the response to our surveys was reasonable for this type of method (44% for survey one and 57% for survey two).[106, 107]

Given that five art forms were identified in this study, future studies could look at patterns of engagement to see if those who engage in the arts have a narrow focus (i.e. engage in only one art form) or a more broad focus (i.e. engage in several art forms). As there is a growing interest in understanding the contribution of different art forms in population health, research should be conducted to look at both the individual effect and the cumulative effects of engaging in the five art forms on health and wellbeing. Future studies could also look at the relationship between active and passive activities to see if those who make art are also more likely to attend arts events.
and also to see if professional artists have a different method of engagement to amateur artists. Based on Dutton’s definition of the arts via a list of twelve characteristics,[33] it would also be informative to look at differences in level of engagement based on skill, pleasure, representation, emotional saturation, intellectual challenge and intention, especially between professional and amateur artist.

**Conclusion**

Arts engagement can be defined as active (e.g. making or creating art) or passive (e.g. attending events) involvement in creative events or activities within a variety of art forms (i.e. performing arts; visual arts, design and craft; community/cultural festivals, fairs and events; literature; online, digital and electronic art) and measured via 91 activities. It is postulated that the clarification of art forms and a comprehensive list of activities will be useful to those conducting studies in the field of population health, the arts or arts-health, especially those developing population based surveys, while a method for measuring the extent of engagement would be useful to those investigating the relationship between arts engagement and health. By clarifying key terminology within the arts and health nexus, it is anticipated that this research could help facilitate thought and communication about the concept of arts engagement.

This study has explored the definition of arts engagement in terms of current art forms, activities and level of engagement. The definition was collaboratively developed via the views and ratings of experts. Although it is acknowledged that the arts are continuously evolving and that the art forms and activities identified in this research will, in time, need to be updated and refined, for now, this study provides a clarification of art forms and activities that can be utilised by those developing population based surveys and gives direction as to which activities should be utilised when calculating a prevalence of arts engagement or quantifying engagement in the arts.
ARTS FOR HEALTH
Chapter 5

Arts for Health - A Framework
5.0 PREFACE

This chapter describes the development of a health-arts framework. The framework was developed by interviewing members of the general population who engage in the arts for enjoyment or as a hobby. This chapter describes the aims of the research, method, analysis, results and discussion. This chapter was published in 2014 in BMJopen (Figure 5.1) and according to ‘Altmetric’ is currently ranked in the top 1% of articles by attention (based on 2.7 million articles across all journals). The chapter is presented as it appears in the journal on the date of publication.
5.1 ABSTRACT

Objective: In recent years the health-arts nexus has received increasing attention; however, the relationship is not well understood and the extent of possible positive, negative and unintended outcomes is unknown. Guided by the biopsychosocial model of health and theories of social epidemiology, the aim of this study was to develop a framework pertaining to the relationship between arts engagement and population health that included outcomes, confounders and effect modifiers. A health-arts framework is of value to researchers seeking to build the evidence base; health professionals interested in understanding the health-arts relationship, especially those who use social prescribing for health promotion or to complement treatments; in teaching medical, nursing and health-science students about arts outcomes, as well as artists and health professionals in the development of policy and programs.

Design: A qualitative study was conducted. Semi-structured interviews were analysed thematically.

Setting: Western Australia.

Participants: Thirty-three Western Australian adults (18+ years). Participants were randomly selected from a pool of general population nominees who engaged in the arts for enjoyment, entertainment or as a hobby (response rate=100%).

Results: A thematic analysis was conducted using NVivo (Version 10). The resulting framework contained seven outcome themes and 63 subthemes. Three themes specifically related to health, i.e. mental, social and physical health, while economic, knowledge, art and identity outcomes were classified as health determinants. Within each theme, positive, negative and unintended outcomes (subthemes) were identified and categorised as relating to the individual and/or to the community. A list of confounding and/or effect modifying factors, related to both the arts and health, was identified.

Conclusion: Given the increasing pressure on health resources, the arts have the potential to assist in the promotion of health and healing. This framework expands on current knowledge, further defines the health-arts relationship and is a step towards the conceptualisation of a causal health-arts model.
Strengths and limitations of this study:

- In recent years the health-arts nexus has received increasing attention from clinicians, researchers, health/social care professionals and policy makers. However, evidence of the relationship between arts engagement and population health is in its infancy. Via a framework, outcomes need to be systematically identified and relationships scientifically demonstrated.[6]

- In this qualitative study, a framework to understand the relationship between arts engagement and population health was developed. The framework contained seven outcome themes: mental health, social health, physical health, economic, knowledge, art and identity outcomes. Within each theme, positive, negative and unintended outcomes of public and individual consequence were identified. The framework is of relevance to those interested in understanding the relationship between the arts and health, especially doctors and health/social care professionals involved in social prescribing for health promotion or in conjunction with conventional therapies and treatments.

- A strength of this study was that via a framework, a comprehensive account of the health-arts relationship was encapsulated in a clear, concise and user-friendly format. A second strength was that possible confounders and effect-modifiers to the health-arts relationship were identified and thirdly, all participants invited to take part in an interview did so (100% response rate). To reduce selection bias and increase sample credibility, interviewees were randomly selected from general population nominees who engaged in the arts for enjoyment, entertainment or as a hobby. The study was representative of the Western Australian population in terms of location and attendance of arts events, however, as nominees were initially recruited via purposive sampling, a limitation was that there was an over representation of females and people with a university or higher degree.

5.2 BACKGROUND

In 2002, the editor of the British Medical Journal wrote ‘Spend (slightly) less on health and more on the arts – health would probably be improved’. [37] Smith’s contention was based on the idea that diverting a small proportion of the British health budget to
the arts could potentially improve the health of the general population, as true efficiencies to healthcare were likely to come from doing things differently, rather than quicker or at a lower cost.[37] Evidence of the benefits of arts engagement has been mounting since the 1990s.[27] However, the research has focused on specific groups (e.g. patients, prisoners, youth) rather than the general population and on positive consequences rather than the variety of positive, negative and unintended outcomes. The research has also focused on art therapy or specific art programs, rather than the art people do in their everyday lives for enjoyment, entertainment or as a hobby. In addition, the relationship between arts engagement and population health is largely unexplained, with a clear framework and scientific approach needed if we are to move the health and arts debate beyond anecdote and opinion.[6] For researchers to establish whether or not a causal relationship exists between the arts and health the following needs to occur: (1) a plausible conceptual framework of the relationship between arts engagement and health needs to be developed; (2) within this framework, possible confounders and effect modifiers to the health-arts relationship need to be identified (possibly via analogy from existing health-arts research or other research fields), (3) good study designs, that consider coherence and temporal order, need to be employed, (4) the strength, consistency, specificity and dose-response relationship between arts engagement and health need to be considered.[39] The development of a health-arts framework is a step towards the conceptualisation of a causal arts and health model, and of value in: (1) the design and analysis of research studies that seek to build the health-arts evidence base; (2) health settings that use social prescribing for health promotion, or to complement conventional medicine; (3) teaching students about the impact of the arts, and (4) the development of health-arts policy and practice.

5.2.1 Arts and health definitions

It is suggested that arts engagement has both individual and community outcomes,[46] as well as instrumental and intrinsic benefits.[16] ‘Arts engagement’ can be defined as active (e.g. making or creating art) or passive (e.g. attending arts events) involvement in creative events or activities within a variety of art forms (e.g. performing arts, visual arts, literature).[108] According to the World Health Organisation, ‘health’ is a resource for living via a state of physical, mental and social wellbeing and is more than
the absence of disease or infirmity,[38] while ‘health determinants’ involve the context of people’s lives that influence health.[109] An ‘outcome’ refers to the consequent effect of an action, program, activity or event.[110] In the health-arts context, confounders are factors relating to arts engagement that also affect health outcomes, while effect-modifiers are factors that make the effect of arts engagement on health smaller or larger.

5.2.2 Arts engagement and health outcomes
Clinical studies have found that arts engagement promotes relaxation and mental health by reducing patient stress, anxiety and depression.[50, 51] For people experiencing mental health issues, arts programs increase confidence, self-esteem and self-understanding.[3, 53] In the general population, arts engagement improves psychological wellbeing and life satisfaction.[14, 57] The arts also entail inclusive processes that act as a catalyst for creating connections between people who are similar (i.e. bonding social capital) and people who are different (i.e. bridging social capital) in terms of certain characteristics, e.g. socioeconomic status, age.[62] As a result, community arts programs expand social networks and facilitate a sense of belonging.[3] The arts have also been used in urban renewal projects to encourage community cohesion, identity and the development of civically valuable behaviours such as tolerance and respect.[62, 65, 66] Research conducted in the United Kingdom, America and Sweden suggests that after controlling for a variety of factors, attending cultural events is positively associated with general health and longevity.[36, 68, 69] With the exception of general health and longevity, few studies have looked at the direct physical health outcomes associated with arts engagement, e.g. health behaviours.[2] In addition to health, engagement in the arts has been found to impact health determinants such as learning and skill development[16, 66, 92, 93] and enhances economic activity, by influencing the income of arts organisations and artists, as well as indirect spending in other areas of the economy (e.g. transport, tourism).[65, 66]

5.2.3 Aim of this study
The arts, with its emphasis on self-expression, creativity and understanding has a unique contribution to make to health;[45] however, the health-arts relationship, is not well understood and the extent of possible outcomes, not immediately obvious.
As guided by theories of social epidemiology (e.g. psychosocial, eco-social) and the biopsychosocial model of health, the aim of this qualitative study was to develop a framework pertaining to the relationship between arts engagement and population health by exploring the positive, negative and unintended outcomes gained by members of the general population and to identify possible confounders and effect modifiers.

5.3 METHODS

5.3.1 Recruitment and sampling

Purposive random sampling was utilised in this study. First, to encourage a range of people from the general population to nominate, the study was advertised via the email lists of two universities, two arts organisations and one health organisation. It was possible for people receiving the study email to forward (snowball) the email to their friends, family and colleagues. Paper-based flyers were also posted on three arts related community notice boards. The nomination criteria asked for: (1) adults, aged 18 years or over who (2) engaged in the arts for enjoyment, entertainment or as a hobby. The art forms prompted in the email/flyer were the visual arts, craft, performing arts, literature, digital/electronic arts, and community festivals. The modes of arts engagement prompted in the email/flyer, included making/creating art and attending events. Purposive sampling is often used in qualitative research to gain access to people who are able to answer a specific research question due to predetermined criteria, such as their experiences, knowledge or specific characteristics, and leads to greater depth and richness of the data collected.

Overall, 98 general population adults nominate for inclusion in the study via the telephone (n=2) or by completing an online form (n=96).

Second, to increase sample credibility and reduce selection bias, of the 98 adults who nominated, 33 people were randomly selected for an interview using a random number generator in Microsoft Excel 2010 (i.e. RANDBETWEEN [0,1] where 1=include). Although there are no established cannons of qualitative practice regarding sample size, the literature suggests that 20 to 30 interviews is sufficient to reach data saturation (i.e. the point in a study where no new themes or concepts relevant to the...
research question are evident in the data).[90] Of the 33 interviews conducted, data saturation was reached at 27 interviews, but to increase study quality and trustworthiness the extra six interviews (20%) were conducted. All participants selected to take part in an interview did so (response rate=100%). Table 5.1 shows the demographic profile of nominees and interviewees. Although, representativeness is not necessarily the goal of purposive random sampling, for comparison purposes, the demographic profile of the 2011 Western Australian population has also been included.[111]

<table>
<thead>
<tr>
<th>Demographic</th>
<th>2011 Western Australian population (N = 2.39 million)</th>
<th>Nominees (n=98)</th>
<th>Interviewees (n=33)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>50%</td>
<td>29%</td>
<td>39%</td>
</tr>
<tr>
<td>Female</td>
<td>50%</td>
<td>71%</td>
<td>61%</td>
</tr>
<tr>
<td><strong>Location</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metropolitan</td>
<td>78%</td>
<td>78%</td>
<td>79%</td>
</tr>
<tr>
<td>Rural</td>
<td>22%</td>
<td>22%</td>
<td>21%</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school or less</td>
<td>51%</td>
<td>16%</td>
<td>15%</td>
</tr>
<tr>
<td>Trade certificate or diploma</td>
<td>7%</td>
<td>18%</td>
<td>9%</td>
</tr>
<tr>
<td>University or post graduate degree</td>
<td>14%</td>
<td>65%</td>
<td>76%</td>
</tr>
<tr>
<td>Other or not stated</td>
<td>28%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Age Group</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤ 19 years</td>
<td>26%</td>
<td>4%</td>
<td>6%</td>
</tr>
<tr>
<td>20-29 years</td>
<td>15%</td>
<td>36%</td>
<td>33%</td>
</tr>
<tr>
<td>30-39 years</td>
<td>14%</td>
<td>13%</td>
<td>16%</td>
</tr>
<tr>
<td>40-49 years</td>
<td>15%</td>
<td>13%</td>
<td>12%</td>
</tr>
<tr>
<td>50-59 years</td>
<td>13%</td>
<td>21%</td>
<td>21%</td>
</tr>
<tr>
<td>60+ years</td>
<td>17%</td>
<td>12%</td>
<td>12%</td>
</tr>
<tr>
<td><strong>Art Form</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visual arts, design and craft</td>
<td>†</td>
<td>65%</td>
<td>64%</td>
</tr>
<tr>
<td>Performing arts</td>
<td>†</td>
<td>67%</td>
<td>58%</td>
</tr>
<tr>
<td>Literature</td>
<td>†</td>
<td>46%</td>
<td>36%</td>
</tr>
<tr>
<td>Electronic, online and digital arts</td>
<td>†</td>
<td>19%</td>
<td>15%</td>
</tr>
<tr>
<td>Festivals and fairs</td>
<td>†</td>
<td>55%</td>
<td>45%</td>
</tr>
<tr>
<td><strong>Mode of Engagement</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Make or create art</td>
<td>†</td>
<td>72%</td>
<td>79%</td>
</tr>
<tr>
<td>Attend events</td>
<td>†</td>
<td>88%</td>
<td>88%</td>
</tr>
<tr>
<td>Member of an arts organisation</td>
<td>†</td>
<td>52%</td>
<td>58%</td>
</tr>
<tr>
<td>Work or volunteer in the arts (non-professional)</td>
<td>†</td>
<td>37%</td>
<td>33%</td>
</tr>
<tr>
<td>Completing an arts course (formal or informal)</td>
<td>†</td>
<td>26%</td>
<td>21%</td>
</tr>
</tbody>
</table>

* Multiple response question - some respondents participated in more than one art form or mode of engagement. † Information not available.
5.3.2 Data collection

A semi-structured interview guide was developed by the research team,[91] reviewed by a panel of eight experts with experience in market research, the arts or public health and then piloted with two volunteers. The interview guide contained a mix of questions including, but not limited to, those shown in Figure 5.2. Question four (Figure 5.2) was phrased in the third person to allow participants to speak freely, especially about negative experiences or behaviours. The interviews took place between August 2010 and January 2011. All interviews were conducted by the PhD candidate at a time and place convenient to the participant. Handwritten notes were made at the end of each interview to record emergent thoughts and ideas. Interviews ran for approximately one hour, were tape recorded and transcribed verbatim by an audio typist. All participants answered all interview questions. Transcripts were checked against the tape recordings for accuracy and errors by the researcher who conducted the interviews.

1. Tell me about your most recent experience of engaging in the arts?
2. Tell me about the type of art you do the most?
3. If you were to describe to a friend or family member why you attend/participate in __________, what would you say?
4. I’d like to introduce you to two different people (show stick people card). Like you, <Laura>/<John> (name matched to gender of the interviewee) attend/participate in ________ (activity matched to interviewee’s activity), whereas <Jane>/<Tim> (name matched to gender of the interviewee) never attend/participate in the arts.
   A. How do you think arts engagement positively effects <Laura’s>/<John’s> life?
   B. How do you think arts engagement negatively effects <Laura’s>/<John’s> life?
   C. Do you think <Laura>/<John> would experience any unintended outcomes or consequences as a result of engaging in the arts? What would they be?
   D. How do you think arts engagement makes <Laura>/<John> feel?
   E. If <Jane>/<Tim> was to start engaging in the arts how would <his>/her life change?

Figure 5.2: Interview questions and visual prompts
5.3.3 Analysis

The qualitative software NVivo (Version 10) was used to manage, code and analyse the data. In qualitative research, computer packages such as NVivo, increase analysis transparency, accuracy, efficiency, rigour and trustworthiness. Using guidelines developed by Braun and Clarke (2006), a thematic analysis was conducted to identify, analyse and report on patterns (i.e. themes) within the interview data. Based on the literature, theoretical nodes were identified prior to coding. The 17 theoretical nodes that formed the starting point for the analysis were learning, identity, economic activity, income, mental health, relaxation, stress reduction, reduced anxiety/depression, confidence, self-esteem, self-understanding, self-expression, social capital, networks, support, physical health and life satisfaction.

Interview transcripts were read several times. Concepts relevant to the research question were coded into the existing theoretical nodes, or as new concepts emerged, coded into inductive nodes. By combining or separating nodes, potential themes and sub-themes were created and defined to establish themes and sub-themes that were coherent, consistent and distinctive. As part of the analysis process, NVivo ‘word frequency queries’ were run to identify words and word groups (e.g. stem words, synonyms) that occurred most often, as well as the relative and absolute frequency of word/word groups within the data set. To ensure the analysis was comprehensive in terms of data coverage, ‘text search queries’ were used to look for: (1) specific themes and sub-themes; (2) words with a shared stem (e.g. health, healthy), and (3) words with related meanings (e.g. healthy, well, fit). As guided by the literature, reference to possible confounders and effect modifiers plausibly related to both health and the arts were identified via a text search query. Via a ‘matrix coding query’, sub-themes were identified as positive (Q4A), negative (Q4B) and unintended (Q4C). A matrix coding query enabled concepts to be cross-tabulated across nodes and displayed in a row/column, table format. The resulting table allowed for data assessment and comparison. By ‘clicking’ within the table, qualitative transcript data corresponding to each cell of the matrix could be reviewed. Thematic maps (tree maps) and word clouds were modelled in NVivo to visually represent the relationships between themes and subthemes. Finally, themes were named, defined and then
classified as either a ‘health’ or ‘health determinant’ outcome. On the basis of whether a sub-theme was of private and/or public consequence, it was categorised as relating to the ‘individual’, ‘community’ or both ‘individual and community’. Frequent meetings and discussions between the PhD candidate and her supervisors ensured thorough coding, agreement in the development of framework themes and sub-themes, as well as the selection of appropriate transcript extracts.

5.3.4 Ethics
Permission to conduct this study was granted by The University of Western Australia Human Research Ethics Committee and conformed to the principles embodied in the Declaration of Helsinki. All nominees consented to inclusion in the study and granted permission for research staff to contact them via the telephone if they were randomly selected for an interview. All interviewees were provided with an information sheet that outlined the study purpose, confidentiality and data use. Participation in the study was voluntary, including the option to decline to answer questions, or to stop the interview at any time. Informed consent (verbal and written) to participate and for interviews to be recorded was obtained from all interviewees. Participant data were de-identified during the transcription process.

5.4 RESULTS
The thematic analysis resulted in 850 individual coded-statements from which seven primary outcome themes were identified: mental health, social health, physical health, economic factors, knowledge, art and identity. Mental health outcomes (330 of 850 coded-statements) were mentioned seven times more frequently and social health outcomes (251 of 850 coded-statements) five times more frequently than other outcomes. Physical, mental and social factors were classified as ‘health’ outcomes, while art, economic, knowledge and identity factors were classified as ‘health determinant’ outcomes. Within each of the seven primary themes were both positive/negative and individual/community outcomes.
5.4.1 Health outcomes

(1) Mental health
Mental health is the foundation for individual wellbeing and the effective functioning of a community.[114] In this study 20 mental health subthemes were identified of which half were positive and most related to the individual (Figure 5.3). Overall, arts engagement made people feel happy, was enjoyable, satisfying and resulted in the creation of good memories. Most study participants felt the arts made them more mentally resilient. Some participants felt the arts energised them, while others suggested it was relaxing and “reduced their stress”. Arts engagement increased participants’ self-efficacy (e.g. confidence, self-esteem) and was a means of self-expression and self-reflection. Participants liked that creating art sometimes resulted in compliments and recognition which in turn made them feel valued and respected, e.g.:

“It encourages you to be yourself and be happy. It makes you a more confident person, especially if you are good at what you do and then you get compliments so you feel good about yourself” (Female, 20-29 years, Performing Arts)

On the negative side, arts engagement occasionally made participants feel marginalised for being “arty” and sometimes led to undesirable emotions such as frustration, disappointment and anxiety.

(2) Social health
Social health is influenced by the strength of a person’s network, their understanding of inter-subjective norms and capacity to make their own choices. Overall, 11 social subthemes were identified, of which all were positive (Figure 5.3). Three quarters of those interviewed suggested that the arts increased their network, as it was a way of meeting people of similar and diverse backgrounds, e.g.:

“You build a network without even realising. You’ve got such a range of people who you would never in your normal life meet. They might only see each other once a week but, it’s like you are the oldest friends because you have this really strong love of something that connects you” (Female, 40-49 years, Visual Arts)

Arts engagement reduced feelings of isolation, increased feelings of support and resulted in positive shared experiences. As the arts are a form of entertainment, it was a means of staying in touch with friends and family (e.g. attending a concert together).
Interviewees also obtained enjoyment from giving and receiving art. Through arts engagement, interviewees felt they were part of their community. They felt they were more community minded, that the arts gave them a wider appreciation of society and broadened their ideas/beliefs (e.g. the arts helped them see other people’s perspectives and made them question social norms and stereotypes). Overall, the arts made some study participants feel they were more “interesting”, “worldly” and “cultured”.

(3) Physical health

Eight physical health subthemes were identified of which half were positive and most related to the individual (Figure 5.3). Interviewees indicated their arts engagement resulted in physical activity such as walking, standing for long periods of time, warm-ups and performance based movement such as dancing, e.g.:

“I walk around looking for a good [photographic] shot. Sometimes I’ve walked for an hour” (Male, 40-49 years, Visual Arts)

On the negative side, participants also discussed how arts engagement could result in physical pain or injury (e.g. discomfort from repetitive movements, hearing damage from loud concerts) and that particularly in the visual arts, some materials are poisonous (e.g. solvents, glazes). As arts events are often at night, some participants experienced tiredness. It was also suggested that arts events could have negative health outcomes, as in some instances people drank too much alcohol, took drugs, smoked and breathed in second-hand smoke, e.g.:

“There is a negative effect of being in the arts. You might not realise how much more you start drinking” (Male, 20-29 years, Performing Arts & Literature)

5.4.2 Health determinant outcomes

(4) Art

Art specific outcomes occur via the expression and appreciation of the aesthetic through the process of making and/or experiencing art. In this study, nine art subthemes were identified, the majority of which were positive (Figure 5.3). Overall, most participants thought they had a talent for art. They liked that the arts were non-competitive and allowed them to interact with and support artists and arts organisations. Interviewees also discussed the importance of arts participation,
appreciation and creativity in their lives, but felt that arts engagement was very time consuming, e.g.:

“It can be quite time consuming and you can lose track of things ... so, with a CD, you mean to sit there for five minutes in between other tasks and half an hour later you are still sitting there” (Female, 19 years or less, Festivals)

(5) Economic factors
Economic factors are key determinants of health[109] and relate to the resources available to a person. In this study, five economic subthemes were identified (Figure 5.3), with most participants discussing how expensive arts engagement can be, e.g.:

“It can be cost prohibitive and that’s not just for the ticket. It could also be for the transport, babysitter, the cost of food” (Female, 20-29 years, Festivals)

The ability to create art gave participants potential career options and opportunities (e.g. amateur exhibitions, travel). Performing or making art was seen as a potential source of income; however, participants felt the community were not willing to remunerate highly for amateur artworks and performances. Making art also allowed some interviewees to save money, as they could create artworks for themselves and others, e.g.:

“There is a practical outcome for presents and for myself to put on the wall. You don’t have to go to the shops. You can make it yourself” (Female, 20-29 years, Visual Arts)

(6) Knowledge
Knowledge outcomes relate to the process of formal, informal or unintentional learning and are a key determinant of health.[109] Overall, eight knowledge subthemes were identified, of which all were positive and most related to both the individual and community (Figure 5.3). Study participants described the arts as intellectually stimulating. They discussed how the arts developed their capacities and capabilities, especially the development of general knowledge and skills (e.g. art, business, team work, problem solving, social, communication and literacy).

“I guess there is a learning process ... It [art] expands your realms of knowledge, vocabulary and your spelling” (Male, 20-29 years, Literature)
(7) Identity

Identity relates to how a person sees him or herself and how they are viewed by others. Identity is influenced by a person’s characteristics, thoughts and beliefs. Overall, two identity subthemes were identified (Figure 5.3). Both subthemes were positive, with interviewees indicating that the arts enhanced their connection to self and gave their life more meaning:

“Who I am, is about who I am when I am doing my art. Art gives you something that is totally yours, beyond family, commitments, work. You have a greater understanding of yourself and your life....creating art gives you that chance to express meaning for yourself and life” (Female, 50-59 years, Electronic/Digital Art)

5.4.3 Unintended outcomes

Study participants were asked about the unintended outcomes resulting from engagement in the arts. Participants agreed that some outcomes were unintended, especially social outcomes, such as the ability of the arts to increase a person’s network. Participants also mentioned that the development of business skills and arts related physical activity was unexpected. Other unintended outcomes included feelings of achievement, confidence, self-esteem, happiness, unexpected compliments and recognition. On the negative side, a few participants talked about injuries, increased alcohol consumption, smoking and tiredness being unintentional outcomes of arts engagement.

5.4.4 Confounders and effect modifiers

On one or more occasions, interviewees made reference to age, gender, location, ethnicity, education, income, occupation, marital status, children, general health, health behaviours and engagement in other events/activities in relation to arts engagement or both arts engagement and health. Factors that emerged as particularly important were income, engagement in other activities (especially sport) and location.
Figure 5.3: Arts for health framework
5.5 DISCUSSION

The objective of this qualitative study was to develop a framework pertaining to the relationship between arts engagement (for enjoyment, entertainment, or as a hobby) and population health that would be useful to doctors, researchers, teachers, health/social care professionals, policy makers and artists. The findings of this study are represented in a conceptual framework (Figure 5.3). Within the framework, three themes specifically related to health, these being mental, social and physical health, while art, economic, knowledge and identity outcomes, were classified as health determinants. Mental health and social health were shown in larger font (in the framework) as participants mentioned them more frequently than other outcomes. This could suggest that arts engagement had a greater impact on mental and social health than other outcomes however, this assumption requires further investigation.

As previously stated, for the health-arts field to ascertain whether or not a causal relationship exists between health and the arts, (1) a plausible health-arts framework needs to be developed and (2) health-arts confounders and effect modifiers need to be identified and accounted for when analysing data. Cross sectional studies can be used for establishing associations, but to establish causality the field needs to move to randomised interventions and longitudinal studies. This study addresses the need for a framework and identifies possible health-arts confounders/effect modifiers. Factors shown in the framework may be both confounders and effect-modifiers, but this requires further investigation. Acknowledging the existence of confounders and effect-modifiers and accounting for them in future analyses, enhances our ability to avoid spurious conclusions about the health-arts relationship and assists us to more accurately quantify the magnitude of this relationship.

In this study the focus was the general population, and the art they do in their everyday lives, rather than the more common practice of focusing on particular target groups or specific arts programs, as it is our view that the arts can make a difference to the overall health of the community, not just specific sub-groups. The significance of a population based health-arts framework is that a population health approach to research and practice can now occur and be guided by this framework. This is not to say that the framework is only relevant to the general population. Many of the outcomes included in the framework are also found in the arts program literature.[34,
Therefore, although members of the general population were interviewed it is suggested that the framework equally applies to demographic sub-groups and should also be useful when evaluating the outcomes of arts programs, but that the effect of arts engagement on specific mental health, social, physical, economic, knowledge, arts specific and identity outcomes may vary (i.e. be larger or smaller) for specific groups due to effect modification, a list for which is provided in the framework.

5.5.1 Comparison with other studies

The outcomes associated with arts engagement are interconnected, iterative, relational and temporally bound. As postulated by Iyengar et al (2012), arts engagement was found to have a number of outcomes of individual and public consequence. In this study, the relationship between arts engagement and population health was also found to be a composite of both positive and negative outcomes. Overall, interviewees more frequently mentioned individual rather than community outcomes, and positive rather than negative outcomes. Given the qualitative nature of this study, this is to be expected as memory about self-events is superior to other-events, and pleasant events recalled better than unpleasant. These findings are also interesting as they highlight the mismatch between why people participate in the arts (i.e. mostly for subjective reasons) as compared to why the arts are valued and funded (i.e. due to the benefits they provide to the community).

In 2009-10, 86% of Australian adults and 88% of Western Australian adults attended at least one cultural event or venue in the previous 12 months. Given the numerous positive outcomes associated with arts engagement found in this and other studies, it is not surprising that the arts are a popular pastime. Nonetheless, the identification of negative outcomes, such as excessive alcohol consumption and exposure to second-hand smoke may reduce some of these positive benefits. It is beyond the scope of this study to explore whether negative outcomes are caused by arts engagement, or are a reflection of those who engage in the arts. However, if arts events are places where negative health behaviours occur, then health organisations should sponsor the arts to encourage healthy environments and promote health to audiences and participants, i.e. ‘Health in Arts’. In Australia, health-arts
sponsorship agreements to advocate physical activity, anti-smoking, sun protection, nutrition and safe alcohol consumption have been found to be effective.[4, 95, 116] In addition to negative health outcomes, study participants also acknowledged that some outcomes were unintended, particularly social benefits. This finding should be of interest to those conducting health-arts program evaluations, as evaluations are often based on pre-determined aims and objectives; however, this study suggests that arts outcomes can extend beyond what is anticipated or planned.

5.5.2 Implications for clinical practice
As the pressure on health systems, resources and providers grows, many are calling for a de-medicalisation of people’s lives and the search for more holistic solutions that encourage patient learning, autonomy and self-care.[117] The arts have the potential to become an important form of health promotion and healing, therefore, this study suggests four important points for clinicians and health/social care professionals. Firstly, engagement in the arts has the potential to positively influence mental health, social health, physical activity and health determinants in the general population. Secondly, the framework increases understanding of the possible outcomes of social prescribing, especially Arts on Prescription.[7] Thirdly, arts related outcomes can be both positive and negative and this should be considered when suggesting or prescribing creative events and activities. Finally, the majority of patients may not realise the potential impact of arts engagement for health promotion and/or recovery, therefore if the arts are prescribed to a patient, the framework could be used to explain and increase their understanding of arts related outcomes.

5.5.3 Strengths and limitations of the study
Strengths of this study include the development of a succinct and comprehensive health-arts framework, including possible confounders and effect-modifiers. To reduce selection bias and increase sample credibility, interviewees were randomly selected from a pool of nominees. In addition, all participants invited to take part in an interview did so. Overall, nominees and interviewees reported similar levels of arts attendance (88%) to those reported for the general population in 2009-10 by the Western Australian Department of Culture and the Arts.[96] The sample was also
representative of the Western Australian population in terms of metropolitan or rural location, however, a limitation was that there was an over representation of females and people with a university or higher degree. This is likely the result of the purposive sampling technique employed to recruit nominees, especially via university email lists. A further limitation of this study was that interviewees were specifically asked how arts engagement makes people feel, possibly causing an information bias towards mental health outcomes.

5.5.4 Conclusion

If health is more than the absence of disease, pain and sickness and is more about adaptation, understanding and acceptance, then the arts may be more powerful than anything medicine has to offer.[37] This study expands on current knowledge and brings us closer to the development of a causal health-arts theory. To develop the framework into a theory, future research would need to identify and quantify the strength of the relationship between the arts and each outcome suggested in the framework as well as direct and indirect mechanisms of action. Enablers and barriers to arts engagement should be considered and added to the framework, as well as conditions under which the health-arts relationship does or does not occur. The framework could also be enhanced by identifying additional sub-themes and determining if a threshold level of arts engagement (e.g. hours per week) is needed before outcomes start to accrue, and once initiated, the manner in which outcomes are produced (e.g. slowly, quickly, does this change with time?). Future research could also look at how outcomes are influenced by mode of engagement (e.g. making versus experiencing art), type of art form (e.g. visual arts versus literature) and whether engaging in single or multiple types of art forms differentially affects health outcomes. Overall, this framework should be viewed as a starting point and should provoke conversation, debate and further research. It is expected that in time, the framework will need to be reviewed as we learn more about the relationship between arts engagement and general population health.
Title: Untitled

Acrylic on canvas (60cm x 90cm)
This painting was created by the candidate during the course of the PhD
Chapter 6

Arts for Health - A quantification of the relationship between the arts and mental wellbeing
6.0 PREFACE

Using the definition of arts engagement developed in Chapter 4 and the Arts for Health framework developed in Chapter 5, this chapter sought to quantify the number of hours of arts engagement associated with good mental health. This was achieved via a cross-sectional survey of the Western Australian general population (i.e. The Healthy Arts telephone survey). This chapter describes the aims of the research, method, analysis, results and discussion. This chapter is currently ‘under review’.

In addition to mental health, the PhD candidate acknowledges that Chapter 5 also identified social health and physical health as being outcomes of general population arts engagement. However, an investigation of the number of hours of arts engagement needed for good social health and physical health was considered outside the requirements for this PhD and will be pursued post-doctorally.

6.1 ABSTRACT

Objective:
The arts provide a range of mental health benefits, however, little is known about this relationship at a population level. This study examined the association between recreational arts engagement (hours per year) and general population mental wellbeing. The quantification of this relationship is of value to (1) health and social care professionals who use art as method for improving community health; (2) to health promoters in the development of messages, policy and programs and (3) to researchers seeking to build the evidence base.

Method:
A cross sectional telephone survey was conducted with a random sample of 702 Western Australian adults aged 18+ years (response rate 71%). The dependent variable was subjective mental wellbeing (i.e. Warwick-Edinburgh Mental Wellbeing Scale, WEMWBS). The independent variable was hours engaged in the arts.
Results:
The prevalence of arts engagement was 83%. The average WEMWBS score was 53. After adjustment for demographics, general health, holidays, sports and religious engagement, respondents with 100 or more hours/year of arts engagement (high engagement) had significantly (p=0.003) better mental wellbeing than those with none (0 hours/year), low (0.1-22.9 hours/year) and medium (23-99.9 hours/year) levels of engagement. Respondents with none, low and medium engagement had similar WEMWBS scores (p=0.358).

Conclusion:
Evidence of a relationship between arts engagement and general population mental health was found in this study. Overall, 100 or more hours/year of art engagement (i.e. 2+ hours/week) was associated with better wellbeing than other levels of engagement. The potential of creative events and activities to impact general population mental health should be investigated further.

6.2 BACKGROUND
Good mental health is essential for individual and community wellbeing [48], yet world-wide, over 450 million people suffer from mental illness [114]. Good mental health enables people to contribute to their community and realize their potential, while poor mental health is a leading cause of mortality, disability and burden of disease [49]. Overall, women compared to men; unmarried compared to married/de-facto; single parent with children compared to couple only households and younger compared to older people experience higher rates of mental illness [118, 119]. Engagement in physical activity [120], spirituality [121], good general health [43], and holidays [122] are associated with mental wellbeing, while poor education and low income are associated with a higher prevalence of mental disorders [118, 123]. The emergence of the positive psychology paradigm has shifted the focus of mental health research from just treatment, to also include wellbeing and prevention [124]. Due to its emphasis on creativity, self-expression, social activities and communication the arts have a unique contribution to make to mental wellbeing.[45, 125].
6.2.1 Arts engagement and mental health

The arts are a popular recreational pastime. It is estimated that 78% of British (16+ years),[23] 86% of Australian (15+ years),[9], 85% of New Zealander (15+ years),[12] and 99% of Canadian (15+ years) [18] adults take part in creative events and activities. Arts engagement can be defined as active (e.g. making art) or passive (e.g. attending concerts) involvement in creative events or activities within a variety of art forms such as the performing arts, visual arts and literature.[108] Arts engagement improves mental health and resilience by encouraging social inclusion, fostering coping skills and promoting adaptive behaviours.[125] Clinical studies have found that arts engagement promotes patient recovery, relaxation and reduces patient stress, anxiety, depression.[50-52] Arts programs for people experiencing mental health issues, have been linked with increased participant confidence and self-esteem.[3, 53]. Although the arts are a popular pastime, little is known about arts engagement and mental health from a population perspective as most health-arts studies focus on clinical populations or specific target groups (e.g. youth, the elderly) rather than the general population. Where population-based studies have been conducted, arts engagement has been linked with perceptions of happiness, stress reduction and personal fulfilment.[14, 57]. In addition, the literature focuses on art programs to treat mental illness, rather than prevention, health promotion or wellness via recreational art i.e. the art people do as part of their everyday lives for enjoyment, entertainment or as a hobby [8]. In the same way engaging in recreational sport and exercise is linked with good health,[126] the arts could also hold the key to a new method of promoting, maintaining and improving the mental wellbeing. To evaluate this idea, research needs to assess and measure the arts and mental wellbeing in terms of a dose-response relationship.

6.2.2 Aims of this study

The first aim of this study was to determine if at a population level, there was a relationship between arts engagement and mental wellbeing. If a relationship was demonstrated, the second aim was to quantify the number of hours of arts engagement associated with good mental health. A better understanding of the relationship between mental health and arts engagement is of value in the development of health promotion messages, policy, programs and in settings that use
arts activities/events to treat general population clients (e.g. social prescribing or artson-prescription) [63].

6.3 METHOD

6.3.1 Participant recruitment and survey
Between September 2011 and May 2012, telephone interviews were conducted with the Western Australian community (18+ years). Residential telephone numbers were randomly selected from the Australian Electronic White Pages telephone directory. To increase the likelihood of a representative distribution of respondents, once contacted, the adult in the household who would next be celebrating a birthday was invited to participate in the study. The cross sectional survey was developed by the research team, reviewed by a panel of ten experts with experience in market research, the arts and/or public health and carried out by trained interviewers using a computer assisted telephone interview system.[97] The survey took 15 minutes to complete and included questions about arts engagement over the previous 12 months (e.g. type, days and hours engaged), involvement in non-arts activities (e.g. sports engagement, religious activities, holidays), general health, mental wellbeing and demographics.

6.3.2 Dependent variable: subjective mental wellbeing
The dependent variable in this study was subjective mental wellbeing and measured by asking respondents the 14 items contained in the Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS), i.e. I’ve been feeling ... optimistic, useful, relaxed, interested in others, good about myself, close to others, confident, loved, cheerful; I’ve had energy to spare; I’ve been ... dealing with problems well, thinking clearly, able to make up my own mind and interested in new things [98]. Permission to utilise WEMWBS was granted by the University of Warwick. WEMWBS was scored by summing responses to each of the 14 items (i.e. 1=none of the time, 5=all of the time). The minimum possible score was 14, the maximum was 70.

6.3.3 Independent variables: arts engagement
The independent variable in this study was total hours engaged in the arts in the last 12 months. Quantifying engagement by asking questions about (1) activities/events over the last 12 months [36, 99] and (2) measurement in terms of time[100, 101] are
common in the literature. As shown in Figure 6.1, arts engagement was measured by asking questions about specific types of activities i.e. arts attendance (6 questions), participation (5 questions), learning (1 question), working/volunteering (1 question) and membership (1 question). For each item respondents were asked if they had engaged in the arts activity/event in the previous 12 months (yes/no). If yes, they were asked to describe the activity/event. Respondents were then asked how many days in the last 12 months they had engaged in each type of activity/event, followed by (on a typical day), how many hours they spent engaging in that activity/event.

1. Attendance: In the last 12 months, have you visited or attended any ….
   • Performing arts events like plays or theatre events, arts house movies, dance performances, music recitals, live performances and concerts
   • Visual arts events at galleries and studios or art exhibitions of things like paintings, sculptures, craft, photography, fashion, jewellery, ceramics or textiles
   • Literary events such as book launches, author talks or book readings
   • Community arts festivals, fairs or cultural performances
   • Artist talks or lectures about their work
   • Listened to or viewed an artwork, performance or literary event via a website, web stream or podcast

2. Participation: In the last 12 months have you …..
   • Made or created any types of visual art such as paintings, drawings, craft, sculpture, photography, fashion, jewellery, ceramics or textiles
   • Written any literary art such as short stories, poetry, a novel or script
   • Made an electronic, digital or online art work such as an electronic painting, digital photography, animation, film or music recording
   • Participated in an event as a performer, dancer, singer, actor or musician
   • Participated in arts related rehearsals

3. Learning: In the last 12 months did you take part in any arts related classes, workshops or training programs?

4. Work or volunteering: In the last 12 months did you work or volunteer in the arts?

5. Membership: In the last 12 months, were you a member of an arts related society, club or organisation?

Figure 6.1: Arts engagement survey questions

6.3.4 Analysis

The analysis strategy involved a descriptive investigation of the data followed by Pearson chi-square tests to explore differences by arts engagement and ANOVAs to explore differences in average WEMWBS scores. Arts ‘attendance’ in the previous 12 months was calculated based on respondents indicating they had attended one or more of the six survey items relating to attendance. Similarly, ‘participation’ in the
previous 12 months was calculated based on respondents indicating they had participated in one or more of the five survey items relating to participation. A respondent was considered to be engaged in the arts in the previous 12 months (prevalence) if they had attended an arts event, and/or participated in an arts event or activity, and/or took part in arts related learning, and/or worked or volunteered in the arts (on a non-professional basis) and/or had been a member of an arts organization, club or society. ‘Total days engaged in the arts in the previous 12 months’ was calculated by summing together the number of days respondents had spent attending, participating, learning, working/volunteering or being a member of an arts organization, club or society. ‘Hours per day engaged in the arts in the previous 12 months’, was calculated by first multiplying hours on a typical day by number of days engaged in each type of arts activity over the last 12 months. This was then summed and the total divided by the sum of days engaged in each type of arts activity. ‘Hours per year engaged in the arts’, was calculated by first multiplying hours on a typical day by number of days engaged in each type of arts activity in the previous 12 months and summing each sub-total together. As respondent data showed a skewed distribution ‘hours per year engaged in the arts’ was grouped into quartiles i.e. no art (0 hours/year), low arts engagement (0.1 to 22.9 hours/year), medium arts engagement (23 to 99.9 hours/year) and high arts engagement (100 or more hours/year). This was followed by linear regression analyses to investigate the association between arts engagement and WEMWBS scores. Overall, three models were fitted. The first model estimated the direct (unadjusted) effect of arts engagement; the second estimated the effect of arts engagement after adjustment for demographics (i.e. age, sex, location, income, education, marital status and children); the third adjusted for demographics, general health, engagement in sport, religious events/activities and holidays from work. With the exception of the effect modification analyses, results were assessed at the 0.05 level of significance. Effect modification was assessed at the 0.01 level of significance to avoid a finding due to chance. The data were analysed using SPSS 21.0 for Windows and SAS 9.3 for Windows.

6.3.5 Ethics and consent

Permission to conduct this study was granted by The University of Western Australia Human Research Ethics Committee. Potential respondents were provided with an
explanation of the study and invited to provide verbal consent to participate at the beginning of the telephone interview. The respondents who agreed to take part in the study were assured that their answers were confidential, that they could withdraw from the study at any time and that all questions were voluntary. Respondents were made aware that the information they provide would only be used for research purposes.

6.4 RESULTS
Overall, 989 phone numbers were called, of which 281 (28%) people declined to participate and 708 (72%) people completed an interview. Six respondents were excluded from the analysis as they were professional artists. This resulted in a sample of 702 community members. A sample size of 702 gives 90% power to detect a difference of 0.25 standard deviations in average mental well-being (WEMWBS) for higher vs lower levels of arts engagement. Table 1 shows the demographic, engagement and WEMWBS characteristics of respondents. For comparison purposes the 2011 Western Australian population profile was also included [127, 128]. Overall, 50% of respondents were female, 9% were 18-29 years, 9% 30-39 years, 16% 40-49 years, 24% 50-59 years and 42% 60+ years. Approximately two thirds of respondents lived in the metropolitan area, were married or in a de-facto relationship, engaged in sport and had not attended a religious service/event in the last 12 months. Household income varied from less than AUD$39,999 to more than $120,000; education ranged from high-school (or less) to university higher degrees. General health varied from very bad to very good. Approximately half of all respondents had taken a holiday or break from work (for two or more weeks) in the previous 12 months. Most respondents did not have children in their household.

6.4.1 Arts engagement
As shown in Table 6.2, in the previous 12 months, 78% of respondents had attended an arts event; 48% participated in the arts; 11% took part in arts related learning; 11% worked or volunteered in the arts and 10% were a member of an arts society, club or organisation. The highest number of respondents attended a performing (63%) or visual arts event (51%).

105
Table 6.1: Respondent demographic, engagement and WEMWBS characteristics (n=702)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Level</th>
<th>n</th>
<th>%</th>
<th>2011 Western Australian population* (% n = 2.3 million people)</th>
<th>Means in the arts</th>
<th>p-value</th>
<th>WEMWBS</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographics</td>
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<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>Male</td>
<td>351</td>
<td>50.0</td>
<td>50%</td>
<td>75.5</td>
<td>p&lt;0.001</td>
<td>53.2</td>
<td>NS</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>351</td>
<td>50.0</td>
<td>50%</td>
<td>90.3</td>
<td>p=0.013</td>
<td>53.6 (p=0.41)</td>
<td></td>
</tr>
<tr>
<td>Age Group</td>
<td>18-29 years</td>
<td>63</td>
<td>9.0</td>
<td>15%</td>
<td>90.5</td>
<td>p=0.021</td>
<td>52.8</td>
<td>p=0.021</td>
</tr>
<tr>
<td></td>
<td>30-39 years</td>
<td>61</td>
<td>8.7</td>
<td>14%</td>
<td>85.2</td>
<td>51.5</td>
<td>52.6</td>
<td></td>
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<tr>
<td></td>
<td>40-49 years</td>
<td>115</td>
<td>16.4</td>
<td>15%</td>
<td>89.6</td>
<td>52.6</td>
<td>54.4</td>
<td></td>
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<tr>
<td></td>
<td>50-59 years</td>
<td>170</td>
<td>24.2</td>
<td>13%</td>
<td>84.1</td>
<td>53.1</td>
<td>53.4</td>
<td></td>
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<tr>
<td></td>
<td>60 years and over</td>
<td>293</td>
<td>41.7</td>
<td>18%</td>
<td>77.5</td>
<td>p=0.013</td>
<td>53.1</td>
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<td>Location</td>
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<td>487</td>
<td>69.4</td>
<td>76%</td>
<td>83.0</td>
<td>NS</td>
<td>53.3</td>
<td>NS</td>
</tr>
<tr>
<td></td>
<td>Country</td>
<td>215</td>
<td>30.6</td>
<td>24%</td>
<td>82.8</td>
<td>(p=0.96)</td>
<td>53.6</td>
<td>(p=0.57)</td>
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<td>Household Income ($AUD)</td>
<td>Less than $39,999</td>
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<td>27.8</td>
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<td>77.4</td>
<td>p=0.87</td>
<td>53.2</td>
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<td>$40,000 to $79,999</td>
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<td>17.5</td>
<td>21%</td>
<td>82.1</td>
<td>53.4</td>
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<td>$80,000 to $119,999</td>
<td>125</td>
<td>17.8</td>
<td>19%</td>
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<td>$120,000 or more</td>
<td>150</td>
<td>21.4</td>
<td>22%</td>
<td>87.3</td>
<td>NS</td>
<td>53.3</td>
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<td></td>
<td>Refused</td>
<td>109</td>
<td>15.5</td>
<td>12%</td>
<td>82.6</td>
<td>(p=0.096)</td>
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<tr>
<td>Education</td>
<td>High school or less</td>
<td>293</td>
<td>41.7</td>
<td>51%</td>
<td>76.1</td>
<td></td>
<td>53.5</td>
<td>NS</td>
</tr>
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<td></td>
<td>Trade certificate or diploma</td>
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<td></td>
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<td>(p=0.48)</td>
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<td></td>
<td>247</td>
<td>35.2</td>
<td>14%</td>
<td>88.7</td>
<td>p&lt;0.001</td>
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<td>53.7</td>
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<td>Married or de-facto relationship</td>
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<td>464</td>
<td>66.1</td>
<td>60%</td>
<td>84.3</td>
<td>NS</td>
<td>54.0</td>
<td>p=0.004</td>
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<td></td>
<td>No</td>
<td>238</td>
<td>33.9</td>
<td>40%</td>
<td>80.3</td>
<td>(p=0.18)</td>
<td>52.3</td>
<td></td>
</tr>
<tr>
<td>Any children in household</td>
<td>Yes</td>
<td>202</td>
<td>28.8</td>
<td>59%</td>
<td>87.1</td>
<td>NS</td>
<td>53.5</td>
<td>NS</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>500</td>
<td>71.2</td>
<td>41%</td>
<td>81.2</td>
<td>(p=0.59)</td>
<td>53.1</td>
<td>(p=0.55)</td>
</tr>
<tr>
<td>In the previous 12 months</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sports engagement (participant, attendance, member)</td>
<td>Yes</td>
<td>465</td>
<td>66.2</td>
<td>67%</td>
<td>87.1</td>
<td></td>
<td>53.8</td>
<td>NS</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>237</td>
<td>33.8</td>
<td>33%</td>
<td>74.7</td>
<td>p&lt;0.001</td>
<td>52.7</td>
<td>(p=0.06)</td>
</tr>
<tr>
<td>Attend religious services or events</td>
<td>Yes</td>
<td>267</td>
<td>38.0</td>
<td>-</td>
<td>88.0</td>
<td></td>
<td>53.8</td>
<td>NS</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>435</td>
<td>62.0</td>
<td>-</td>
<td>79.8</td>
<td>p=0.005</td>
<td>53.2</td>
<td>(p=0.30)</td>
</tr>
<tr>
<td>Taken a holiday or break from work for two or more weeks</td>
<td>Yes</td>
<td>384</td>
<td>54.7</td>
<td>-</td>
<td>88.8</td>
<td></td>
<td>54.5</td>
<td>p&lt;0.001</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>318</td>
<td>45.3</td>
<td>-</td>
<td>75.8</td>
<td>p&lt;0.001</td>
<td>52.0</td>
<td></td>
</tr>
<tr>
<td>General health</td>
<td>Very bad</td>
<td>9</td>
<td>1.3</td>
<td>4%</td>
<td>77.8</td>
<td></td>
<td>45.9</td>
<td>p&lt;0.001</td>
</tr>
<tr>
<td></td>
<td>Bad</td>
<td>23</td>
<td>3.3</td>
<td>-</td>
<td>73.9</td>
<td></td>
<td>45.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fair</td>
<td>123</td>
<td>17.5</td>
<td>10%</td>
<td>80.5</td>
<td></td>
<td>50.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Good</td>
<td>304</td>
<td>43.3</td>
<td>30%</td>
<td>84.2</td>
<td>NS</td>
<td>53.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Very Good</td>
<td>243</td>
<td>34.6</td>
<td>56%</td>
<td>83.5</td>
<td>(p=0.659)</td>
<td>56.0</td>
<td></td>
</tr>
</tbody>
</table>

* Information not available, NS = Not statistically significant
Table 6.2: Prevalence, days and hours engaged in the arts in the previous 12 months

<table>
<thead>
<tr>
<th>Arts Engagement Measure</th>
<th>Attendance (n=546)</th>
<th>Participation (n=340)</th>
<th>Learning (n=80)</th>
<th>Work* (non-professional) or Volunteer (n=77)</th>
<th>Membership (n=72)</th>
<th>Overall Arts Engagement (n=582)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevalence of Engagement in the previous 12 months (all respondents n=702)</td>
<td>77.8%</td>
<td>48.4%</td>
<td>11.4%</td>
<td>11.0%</td>
<td>10.3%</td>
<td>82.9%</td>
</tr>
<tr>
<td>Days engaged in the previous 12 months (all respondents n=702)</td>
<td><strong>Mean</strong> 5.66</td>
<td><strong>20.67</strong></td>
<td><strong>1.76</strong></td>
<td><strong>2.63</strong></td>
<td><strong>2.35</strong></td>
<td><strong>33.06</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Median</strong> 3.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>9.00</td>
</tr>
<tr>
<td>Days engaged in the previous 12 months (arts respondents only)</td>
<td><strong>Mean</strong> 7.27</td>
<td><strong>42.67</strong></td>
<td><strong>15.41</strong></td>
<td><strong>23.96</strong></td>
<td><strong>22.89</strong></td>
<td><strong>39.87</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Median</strong> 4.00</td>
<td>24.00</td>
<td>5.00</td>
<td>15.00</td>
<td>20.00</td>
<td>14.00</td>
</tr>
<tr>
<td>Hours per day engaged in the previous 12 months (all respondents n=702)</td>
<td><strong>Mean</strong> 2.28</td>
<td>1.39</td>
<td>0.39</td>
<td>0.44</td>
<td>0.29</td>
<td>2.44</td>
</tr>
<tr>
<td></td>
<td><strong>Median</strong> 2.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>2.07</td>
</tr>
<tr>
<td>Hours per day engaged in the previous 12 months (arts respondents only)</td>
<td><strong>Mean</strong> 2.92</td>
<td>2.86</td>
<td>3.44</td>
<td>4.01</td>
<td>2.80</td>
<td>2.95</td>
</tr>
<tr>
<td></td>
<td><strong>Median</strong> 3.00</td>
<td>2.00</td>
<td>3.00</td>
<td>3.00</td>
<td>3.00</td>
<td>2.72</td>
</tr>
<tr>
<td>Hours engaged in the previous 12 months (all respondents n=702)</td>
<td><strong>Mean</strong> 16.09</td>
<td>63.32</td>
<td>5.32</td>
<td>9.04</td>
<td>7.02</td>
<td>100.80</td>
</tr>
<tr>
<td></td>
<td><strong>Median</strong> 8.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>23.00</td>
</tr>
<tr>
<td>Hours engaged in the previous 12 months (arts respondents only)</td>
<td><strong>Mean</strong> 20.69</td>
<td>130.75</td>
<td>46.65</td>
<td>82.44</td>
<td>68.49</td>
<td>121.58</td>
</tr>
<tr>
<td></td>
<td><strong>Median</strong> 12.00</td>
<td>49.00</td>
<td>18.00</td>
<td>50.00</td>
<td>42.50</td>
<td>36.00</td>
</tr>
</tbody>
</table>

* Non-professional artist

On average, in the previous 12 months, respondents spent 16 hours attending arts events; 63 hours making or creating art; 5 hours learning about art/the arts; 9 hours working or volunteering in the arts (on a non-professional basis) and 7 hours as a member of a arts society, club or organisation. The prevalence of arts engagement was 83%. Respondents spent an average of 33 days or 101 hours per year engaging in an arts event or activity (median=23 hours, minimum=0 hours, maximum=1572 hours).

When grouped into approximate quartiles, 17% of respondents did not engage in the
arts, 33% had low arts engagement (0.1 to 22.9 hours/year), 24% had medium arts engagement (23 to 99.9 hours/year) and 26% had high arts engagement (100 or more hours/year). As shown in Table 1, females were significantly more likely to be engaged in the arts than males ($\chi^2=27.2$ df=1 $p<0.001$); as were younger compared to older respondents ($\chi^2=12.7$ df=4 $p=0.013$). Arts engagement also significantly increased with education ($\chi^2=16.7$ df=2 $p<0.001$), and was more likely in those who engaged in sport ($\chi^2=17.1$ df=1 $p<0.001$), attended religious services/events ($\chi^2=7.9$ df=1 $p=0.005$) and those who had taken a holiday or break from work for two or more weeks in the previous 12 months ($\chi^2=20.8$ df=1 $p<0.001$).

6.4.2 Arts engagement and mental wellbeing

The WEMWBS mean score for respondents was 53.4 (median=54.0, SD=7.4, minimum=21.0, maximum=70.0). As shown in Table 6.1, respondents who were married or in a defacto relationship had higher average WEMWBS scores that unmarried respondents (F=8.57 df=1 $p=0.004$); as did older compared to younger respondents (F=2.91 df=4 $p=0.021$). Average WEMWBS scores were also significantly higher for those with good general health (F=24.63 df=4 $p<0.001$) and those who had taken a holiday from work in the previous 12 months (F=20.23 df=1 $p<0.001$). As shown in Table 6.3, Model 1 (unadjusted), respondents who engaged in a high level of arts engagement had higher average WEMWBS scores (54.8) than those who did not engage in the arts (52.8) or who had low (52.6) or medium (53.4) levels of engagement. With the exception of having ‘energy to spare’, for 13 out of the 14 WEMWBS questions, item means were highest for high arts engagement respondents compared to other levels of engagement, especially regarding optimism, interest in other people, thinking clearly, feeling loved, being interested in new things and feeling cheerful.

As shown in Table 3, Model 3, after adjustment for demographics, general health, engagement in sport, religious events/activities and holidays (Overall Test - 4 groups $p=0.003$), it was found that people with a high level of arts engagement (i.e. 100 hours or more/year) had higher WEMWBS scores than those with none, low or medium
engagement. In comparison, people with none, low and medium levels of arts engagement were found to have similar WEMWBS scores (Model 3, Overall Test - 3 groups p=0.358), therefore a trend analysis was not applicable. Overall, the relationship between arts engagement and WEMWBS was found to be nonlinear with evidence of a minimum threshold level at 100 hours or more/year of arts engagement (i.e. high engagement vs non/low/medium engagement, Model 3, Overall Test - 2 groups p=0.0006). A small decrease in significance level was found after adjustment for confounding variables, while effect modification by demographic, sport, religious, holiday or general health subgroups was not found to be significant. In general, respondents who participated in high levels of arts engagement had WEMWBS scores approximately two points higher than other levels of engagements (i.e. one third of a standard deviation).

Table 6.3: Association between subjective mental wellbeing and arts engagement (hours per year)

<table>
<thead>
<tr>
<th>Arts engagement</th>
<th>Mean Scores (Unadjusted)</th>
<th>Mean Scores adjusted for demographics (age, sex, location, income, education, married, children)</th>
<th>Mean Scores adjusted for demographics, general health, &amp; engagement in sport, religious events/activities &amp; holidays</th>
</tr>
</thead>
<tbody>
<tr>
<td>None / no art (n=120)</td>
<td>52.83</td>
<td>52.87</td>
<td>53.35</td>
</tr>
<tr>
<td>Low engagement (n=230)</td>
<td>52.59</td>
<td>52.59</td>
<td>52.38</td>
</tr>
<tr>
<td>Medium engagement (n=172)</td>
<td>53.40</td>
<td>53.41</td>
<td>53.21</td>
</tr>
<tr>
<td>High engagement (n=180)</td>
<td>54.84</td>
<td>54.81</td>
<td>54.95</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>β</th>
<th>SE</th>
<th>p-value</th>
<th>β</th>
<th>SE</th>
<th>p-value</th>
<th>β</th>
<th>SE</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>None vs High engagement</td>
<td>-2.01</td>
<td>0.87</td>
<td>0.0206</td>
<td>-1.94</td>
<td>0.90</td>
<td>0.0307</td>
<td>-1.60</td>
<td>0.85</td>
<td>0.0612</td>
</tr>
<tr>
<td>Low vs High engagement</td>
<td>-2.25</td>
<td>0.73</td>
<td>0.0022</td>
<td>-2.22</td>
<td>0.74</td>
<td>0.0026</td>
<td>-2.57</td>
<td>0.69</td>
<td>0.0002</td>
</tr>
<tr>
<td>Medium vs High engagement</td>
<td>-1.45</td>
<td>0.78</td>
<td>0.0650</td>
<td>-1.40</td>
<td>0.79</td>
<td>0.0755</td>
<td>-1.74</td>
<td>0.73</td>
<td>0.0178</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Overall Test – 4 groups (none, low, medium, high arts engagement)</th>
<th>F Value</th>
<th>df</th>
<th>p-value</th>
<th>F Value</th>
<th>df</th>
<th>p-value</th>
<th>F Value</th>
<th>df</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3.48</td>
<td>3</td>
<td>0.0157</td>
<td>3.25</td>
<td>3</td>
<td>0.0215</td>
<td>4.67</td>
<td>3</td>
<td>0.0031</td>
</tr>
<tr>
<td>Overall Test – 3 groups (none, low, medium arts engagement)</td>
<td>0.59</td>
<td>2</td>
<td>0.5548</td>
<td>0.60</td>
<td>2</td>
<td>0.5482</td>
<td>1.03</td>
<td>2</td>
<td>0.3582</td>
</tr>
<tr>
<td>Overall Test – 2 groups (not high, high arts engagement)*</td>
<td>9.26</td>
<td>1</td>
<td>0.0024</td>
<td>8.50</td>
<td>1</td>
<td>0.0037</td>
<td>11.74</td>
<td>1</td>
<td>0.0006</td>
</tr>
</tbody>
</table>

*High arts engagement = 100 hours or more/year; Not high engagement = none, low, medium engagement or 99.99 hours or less/year.
6.5 DISCUSSION

The aim of this research was to determine if at a population level, there was a relationship between arts engagement (as a pastime) and mental wellbeing, and to quantify the number of hours of arts engagement needed for good mental health. Overall, respondents with none, low and medium levels of arts engagement were found to have similar WEMWBS scores. After adjustment for demographics, general health, holidays and engagement in sport and religious events/activities, respondents with high levels of arts engagement (100 or more hours/year) had higher subjective mental wellbeing than those with none, low or medium levels of arts engagement. Respondents who participated in high levels of arts engagement had WEMWBS scores approximately two points higher than other levels of engagement showing a possible health effect.

In this study, the prevalence of arts engagement in the previous 12 months was 83%. This is similar to results reported by the Western Australian Department of Culture and Arts who in 2009-10 estimated engagement in cultural activities and events (by Western Australians) to be 88%.[96] In addition, the WEMWBS mean score for respondents was 53.4 (SD=7.4) which is similar to 2006 Scottish population mean score (50.7, SD=8.8).[98] An association between subjective mental wellbeing (WEMWBS) and arts engagement was found in this study. The relationship was nonlinear with evidence of a minimum threshold level at 100 or more hours of arts engagement per year. The possibility of a threshold level/effect of arts engagement was alluded to by McCarthy and Ondaatje who suggested that the mental and emotional gains from an arts experience were likely to accrue slowly at first and then rapidly once an individual attains a certain level of understanding and knowledge about an art-form, activity or event.[16] The literature also indicates that mental and emotional gains motivate people to persist in physical activity,[120] further research should be conducted to see if this is also true of arts engagement, especially with regards to happiness, quality of life, and resilience to mental illness.

As this study was cross-sectional in design it precluded our ability to establish causality. For researchers to determine whether or not a causal relationship exists between arts engagement and mental wellbeing the following needs to occur: (1) a plausible
conceptual framework[8] of the relationship between arts engagement and mental health including possible confounders and effect modifiers needs to be developed; (2) good study designs, that consider coherence and temporal order, need to be employed; and (3) the strength, consistency, specificity and dose-response relationship between arts engagement and mental health need to be considered.[39] This cross sectional study is a step towards establishing whether or not the mental health-arts relationship is causal and we suggest the field now moves to randomised interventions and longitudinal studies.

This study suggests three important points for clinicians, health/social care professionals and health promoters. Firstly, 100 or more hours/year (i.e. 2 or more hours/week) of arts engagement may have the potential to promote, maintain and improve mental wellbeing in the general population. Secondly, when prescribing creative events and activities as a complement to traditional treatments, clinicians and health/social care professionals should be aware that like medications, the ‘art dose’ is important in achieving positive benefits. Thirdly, if the relationship between hours of arts engagement and good mental health is proved to be causal, there is potential for the development of health promotion campaigns and health messages (e.g. Slogan, ‘Be creative’; by-line ‘2 hours/week is all you need for good mental health’). The use of time related health messages and campaigns via television, radio, print and electronic media have been used to promote the benefits of physical activity to the general population. For example, in Western Australia, the Heart Foundation and Department of Health developed the ‘Find 30 – it’s not a big exercise’ and ‘Find 30 everyday’ messages and campaign to encourage and increase awareness of the amount (i.e. 30 minutes each day) of moderate-intensity physical activity needed for good health.[129]

The strengths of this population based study include its large sample size, high response rate, detailed quantification of arts engagement in terms of hours per year and adjustment for a wide range of confounders and effect modifiers to the relationship between mental health and arts engagement. The sample was representative of the Western Australian population in terms of gender, location, income, marriage and sports engagement, however, a limitation was that there was an
over representation of older adults, people with a university or higher degree and people without children in their household.

6.5.4 Conclusion
If good mental health entails helping the general population to flourish and thrive, then the arts may be more powerful than anything medicine has to offer.[37] Further research is needed to better understand the mental health-arts relationship and the possibility that by encouraging people to engage in creative events and activities, that mental health and wellbeing could be enhanced. Future research should extend on current findings and assess if active (e.g. making art) or passive (e.g. concert attendance) involvement has differential outcomes or if activities/events within specific art forms (e.g. visual versus performing arts) results in similar or different mental health benefits. In addition, because arts engagement has also been linked with enhanced social health and physical activity,[8] population based arts events and activities should be seen as a ‘win’ in many health areas. Further research should therefore be conducted to quantify the amount of arts engagement needed to maximise these social and physical outcomes. The potential of the arts to promote, maintain and improve general population wellbeing should be investigated further.
Chapter 7
Health in Arts - Are the arts an effective setting to promote health messages?
Chapter 7: HEALTH IN ARTS - ARE THE ARTS AN EFFECTIVE SETTING TO PROMOTE HEALTH MESSAGES?

7.0 PREFACE

This chapter evaluates the effectiveness of health in arts by assessing the viability of the arts to promote health messages to the general population. A secondary analysis of the Healthway Survey of Community Recreation and Health was conducted. This chapter describes the aims of the research, method, secondary analysis, results and discussion. This chapter was published in 2013 in ‘Perspectives in Public Health’ (Figure 7.1). The chapter is presented as it appears in the journal on the date of publication.

Figure 7.1: Mills C et al (2013). Are the arts an effective setting for promoting health messages? Perspectives in Public Health 133(2): 116-121.
7.1 ABSTRACT

Aim:
Individuals can contribute to their own wellbeing through the adoption of positive health behaviours and the avoidance of negative health behaviours. The promotion of health messages is a cognitive strategy used to influence the adoption of health enhancing behaviours. Since 1991, arts organisations have been sponsored by the Western Australian Health Promotion Foundation (Healthway) to promote anti-smoking, safe alcohol, physical activity, sun protection and nutrition messages to the general population. The aim of this study was to evaluate the effectiveness of arts sponsorship to promote health messages and therefore gauge the effectiveness of the arts as a communication channel to promote health to the general population.

Method:
A secondary analysis of the Healthway survey of Community Recreation and Health was conducted. The data were collected via a telephone survey of Western Australian adults aged 16 to 69 years. Overall, 1997 respondents participated in this study, a response fraction of 59%. The analysis included a descriptive investigation, followed by logistic regression analyses of message awareness by those engaged and not engaged in the arts for sponsored anti-smoking, safe alcohol, physical activity, sun protection and nutrition messages.

Results:
Overall, 68% of those surveyed were classified as engaged in the arts, either as a participant, attendee or member of an arts organisation. In general, those engaged in the arts were significantly more likely to recall health messages relating to physical activity (adjusted OR 1.9), sun protection (OR 1.8) nutrition (OR=1.5), safe alcohol consumption (OR=1.5) and anti-smoking (adjusted OR=1.3) than those not engaged in the arts.

Conclusion:
Findings from this study suggest the arts have merit beyond intrinsic artistic value and are a viable means of promoting health messages to the general population.

7.2 BACKGROUND
There is growing interest in the link between community engagement in the arts and health. Arts engagement has been linked with improvements in mental health[73] and
Community arts organisations engage with members of the public via creative activities or artistic events and are effective in engaging with both members of the general population and specific groups e.g. young people, people with mental health issues, disadvantaged communities. Many funding bodies support community arts organisations financially via philanthropy or sponsorship and in so doing promote access, participation, and community wellbeing. Since 1991, Western Australian community arts organisations have been able to access sponsorship funding from the Western Australian Health Promotion Foundation (Healthway) in exchange for the promotion of health messages to their members, participants, and audiences. Healthway's enabling legislation also provides sports organisations with access to sponsorship funding so as to ensure that the sponsorship program is broad and far reaching.

7.2.1 Arts and Health Sponsorship

Health sponsorship can be defined as the provision of funding in exchange for the right to promote health messages or products, to request the implementation of health policies and enviro-structural changes at sponsored events and venues (e.g., cigarette smoke free events). Due to the high attendance rates and population reach of the arts, Healthway has utilised sponsorship as a method of promoting health to both hard-to-reach groups and the general population. Healthway is the main sponsor of health messages within the arts in Western Australia. Sponsored art forms include the visual arts, theatre, dance, music, film, literature, circus, community festivals and multi-disciplinary projects. The work of Healthway aligns with health promotion campaigns run by both national and state government departments and is managed in partnership with a range of health agencies. Between 2001 and 2006, Healthway sponsored more than 850 arts projects to the value of AUD$10 million, with an average audience attendance of approximately 6200 people per project. Between July 2005 and June 2006, Healthway sponsored 255 community arts projects totalling more than AUD$2.8 million as well as 450 sports projects to the value of AUD $5.6 million. Health sponsorship methods used by Healthway include signage, announcements, naming rights, role modelling, interactive workshops and promotional merchandise.
Underpinning the planning, execution and evaluation of Healthway’s sponsorship program are both social marketing and communication-behaviour change models.[132] The cognitive impact of exposure to a health message forms the focus of the communication-behaviour change approach.[82] That is, the promotion of health messages at sponsored events allows Healthway to expose the general public or a target group to a message in the hope of influencing health awareness, comprehension, acceptance, intention, and ultimately behavioural action.[82] Healthway’s messages are used to increase awareness in a range of areas including anti-smoking, nutrition, physical activity, safe alcohol consumption and sun protection. Examples of sponsored messages promoted at sponsored arts events include ‘Smarter than Smoking’, ‘Quit’, ‘Go for 2 Fruit & 5 Veg’, ‘Sun Smart’, and ‘Be Active’.

For the past two decades, Healthway in partnership with other health agencies, have exposed the Western Australian community to health messages via the arts. This approach is fairly novel, and if effective, is a model that could be used elsewhere to promote health awareness to the general population. Given that sponsorship can achieve high levels of exposure to a promoted message,[83, 84] and the association between health message exposure and awareness at sports events is apparent in the literature,[75, 78] it was our intention to see if Healthway and its partner organisations had been successful in influencing the (unprompted) health message awareness of those engaged in the arts compared to those not engaged in the arts at a population level. Although it may be intuitive that people engaged in sponsored arts events should be able to recall sponsored health messages, scientific proof is needed to establish if this type of exposure increases awareness. Such evidence is necessary if we are to move the arts and health debate beyond anecdote and opinion.[6] The aim therefore of this study was to evaluate the effectiveness of arts sponsorship to promote health messages and therefore gauge the effectiveness of the arts as a communication channel to promote health to the general population.

7.3 METHOD
In October 2006, a series of telephone interviews were conducted with members of the Western Australian community aged 16 to 69 years as part of Healthway’s survey of Community Recreation and Health.[79] Telephone numbers were randomly selected
from the Australian Electronic White Pages telephone directory. The availability, in Australia, of a single telephone directory in computer format presents a comprehensive and cost effective listing of residential numbers.[133] Once contacted, the adult in the household aged 16 years and over who would next be celebrating a birthday was invited to participate in the study. This procedure ensured a more representative population distribution of respondents from those who were at home and willing to answer the telephone. The telephone survey was carried out by experienced telephone interviewers using a computer assisted telephone interview system.[97] The survey included questions about respondent health message awareness, demographics, and engagement in Healthway sponsored community events. Permission to undertake this study was granted by The University of Western Australia Human Research Ethics Committee.

The dependent variable in this study was unprompted health message awareness. Respondents were asked to recall ‘what health slogans or messages, if any, come to mind when I say smoking’.[103] The same message awareness question was then asked again but the word smoking was replaced with the word alcohol, and then physical activity, nutrition, and sun protection. As shown in Table 7.1, binary variables (aware/not aware) relating to promoted message types was calculated. Unprompted message awareness was chosen over prompted message awareness, as it was considered to be a more sensitive measure.

The independent variable in this study was engagement in the arts. Specifically, whether or not the respondent had engaged in the arts in the last 12 months (yes/no). Determining engagement by asking specific questions about arts activities over the last 12 months is common in the literature.[36, 99] In this study, respondent were considered to be engaged in the arts if in the last 12 months they had been a member of an arts organisation, and/or had attended an arts event as part of an audience, and/or personally participated in an arts activity (e.g., painting, ceramics, dance, music). The possible confounding variables of gender, age group, location, income, and sports engagement were also included in the analysis. Engagement in sport was identified as a possible confounder due to Healthway’s sponsorship of sports organisations via the same messages used to promote health at sponsored arts events.
Table 7.1: Arts sponsorship definitions - unprompted message awareness

<table>
<thead>
<tr>
<th>Message Type</th>
<th>Level</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anti-smoking Messages</td>
<td>Aware</td>
<td>Full or partial recall of messages related to smoking that have been promoted by Healthway in Western Australia since 1991 e.g. Quit, Smarter than Smoking, Smoke Free WA.</td>
</tr>
<tr>
<td></td>
<td>Not Aware</td>
<td>Unable to fully or partially recall a smoking related message</td>
</tr>
<tr>
<td>Safe Alcohol Consumption</td>
<td>Aware</td>
<td>Full or partial recall of messages related to alcohol that have been promoted by Healthway in Western Australia since 1991 e.g. Respect yourself, Drug Aware.</td>
</tr>
<tr>
<td></td>
<td>Not Aware</td>
<td>Unable to fully or partially recall an alcohol related message</td>
</tr>
<tr>
<td>Physical Activity Messages</td>
<td>Aware</td>
<td>Full or partial recall of messages related to physical activity that have been promoted by Healthway in Western Australia since 1991 e.g. Be Active, Find 30 (i.e. Find 30 minutes of physical activity each day).</td>
</tr>
<tr>
<td></td>
<td>Not Aware</td>
<td>Unable to fully or partially recall a physical activity message</td>
</tr>
<tr>
<td>Nutrition Messages</td>
<td>Aware</td>
<td>Full or partial recall of messages related to nutrition that have been promoted by Healthway in Western Australia since 1991 e.g. Go for 2 fruit and 5 veg, Enjoy healthy eating.</td>
</tr>
<tr>
<td></td>
<td>Not Aware</td>
<td>Unable to fully or partially recall a nutrition message</td>
</tr>
<tr>
<td>Sun Protection Messages</td>
<td>Aware</td>
<td>Full or partial recall of messages related to protection from the sun that have been promoted by Healthway in Western Australia since 1991 e.g. Sun Smart, Slip Stop Slap.</td>
</tr>
<tr>
<td></td>
<td>Not Aware</td>
<td>Unable to fully or partially recall a sun protection message</td>
</tr>
</tbody>
</table>

The data were analysed using SAS for Windows (Version 9.1). The analysis strategy comprised an initial descriptive analysis of message awareness for those engaged and not engaged in the arts, and comparison via a chi-square statistic, of the confounding variables for those engaged and not engaged in the arts. This was followed by a logistic regression analysis to investigate the association between arts engagement and message awareness after adjustment for confounding variables. Awareness of each type of health message was analysed separately. Three models were fitted for each message, the first estimated the direct (unadjusted) effect of arts engagement; the second estimated the effect of arts engagement after adjustment for gender, age, income and location; the third model also adjusted for sports engagement. The effect is presented as the estimated odds ratio (OR) and its associated p-value.

7.4 RESULTS

Overall, 1997 respondents aged 16-69 years participated in this study of which half were female. The response fraction was 59%. In total, 12% of respondents indicated they were involved in an arts organisation, club or society, as a member, for the purpose of interacting with people that have a similar arts interest or goal. The most
popular types of organisations, clubs and societies, were theatre, classical music and modern music. In the last year, just over one half of all respondents (55%) had attended an arts event as part of an audience (e.g. the theatre, a music performance) and 41% had personally participated in an arts activity (e.g. painting, ceramics, music). When the primary independent variable of arts engagement was calculated by combining arts membership, attendance, and participation, it was found that 68% (n=1365) of those surveyed were engaged in the arts over the last 12 months. Of the 68% of respondents engaged in the arts, 25% only attended arts events; 21% participated and attended arts events; 11% only participated in events; 8% were a member, participated and attended arts events; 1% were only members; 1% were members and participated; and 1% were members and attended arts events. The survey characteristics of respondents are shown in Table 7.2.

Table 7.2: Arts sponsorship - respondent demographic and arts engagement characteristics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Level</th>
<th>n</th>
<th>%</th>
<th>% 2006 WA popn (16 to 69 years) N=1.40million</th>
<th>% Engaged in the arts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engaged in the arts</td>
<td>Yes</td>
<td>1365</td>
<td>68.4</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>632</td>
<td>31.6</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Gender</td>
<td>Male</td>
<td>1000</td>
<td>50.1</td>
<td>50.1</td>
<td>58.5</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>997</td>
<td>49.9</td>
<td>49.9</td>
<td>78.2</td>
</tr>
<tr>
<td>Age Group</td>
<td>16 to 19</td>
<td>100</td>
<td>5.0</td>
<td>10.0</td>
<td>72.0</td>
</tr>
<tr>
<td></td>
<td>20 to 29</td>
<td>203</td>
<td>10.1</td>
<td>18.7</td>
<td>69.9</td>
</tr>
<tr>
<td></td>
<td>30 to 39</td>
<td>360</td>
<td>18.0</td>
<td>20.3</td>
<td>65.8</td>
</tr>
<tr>
<td></td>
<td>40 to 49</td>
<td>495</td>
<td>24.8</td>
<td>21.1</td>
<td>70.1</td>
</tr>
<tr>
<td></td>
<td>50 to 59</td>
<td>462</td>
<td>23.1</td>
<td>18.4</td>
<td>66.4</td>
</tr>
<tr>
<td></td>
<td>60 to 69</td>
<td>377</td>
<td>18.9</td>
<td>11.6</td>
<td>69.0</td>
</tr>
<tr>
<td>Location</td>
<td>Metropolitan</td>
<td>1420</td>
<td>71.1</td>
<td>74.4</td>
<td>70.3</td>
</tr>
<tr>
<td></td>
<td>Country</td>
<td>577</td>
<td>28.9</td>
<td>25.6</td>
<td>63.6</td>
</tr>
<tr>
<td>Household Income</td>
<td>Less than $20,000</td>
<td>158</td>
<td>7.9</td>
<td>-</td>
<td>62.6</td>
</tr>
<tr>
<td>($AUD)</td>
<td>$20,000 to $39,999</td>
<td>260</td>
<td>13.0</td>
<td>-</td>
<td>62.3</td>
</tr>
<tr>
<td></td>
<td>$40,000 to $59,999</td>
<td>323</td>
<td>16.1</td>
<td>-</td>
<td>64.4</td>
</tr>
<tr>
<td></td>
<td>$60,000 to $79,999</td>
<td>316</td>
<td>15.8</td>
<td>-</td>
<td>70.9</td>
</tr>
<tr>
<td></td>
<td>$80,000 or more</td>
<td>687</td>
<td>34.4</td>
<td>-</td>
<td>72.8</td>
</tr>
<tr>
<td></td>
<td>Refused</td>
<td>253</td>
<td>12.7</td>
<td>-</td>
<td>68.0</td>
</tr>
<tr>
<td>Engaged in Sport</td>
<td>Yes</td>
<td>1719</td>
<td>86.1</td>
<td>-</td>
<td>70.1</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>278</td>
<td>13.9</td>
<td>-</td>
<td>57.5</td>
</tr>
</tbody>
</table>

- Information not available

For comparison purposes, the demographic characteristics of the Western Australian population (16 to 69 years) from the 2006 census are also shown.[134] Overall, females were significantly more likely to be engaged in the arts than males ($\chi^2=89.9$ df=1 $p<0.001$), as were metropolitan compared with country respondents ($\chi^2=8.5$ df=1 $p<0.01$), and those with higher household incomes compared with lower incomes.
(χ²=16.3 df=5 p<0.01). Those respondents engaged in sport were significantly more likely to also be engaged in the arts (χ²=17.4 df=1 p<0.001).

As shown in Table 7.3, respondents were most likely to recall (unprompted) sun protection messages (77%), followed by physical activity (52%), nutrition (48%), anti-smoking (47%) and safe alcohol consumption (39%) messages. The results from model one show that those engaged in the arts were significantly more aware of each message than those not engaged. After adjustment for demographic variables (i.e. gender, age group, income and location), respondents engaged in the arts remained significantly more likely to be aware of a health messages than those not engaged in the arts, although the estimated odds ratios were slightly attenuated. Further adjustment for sports engagement also only slightly attenuated the odds ratios. Overall, the strongest association was for physical activity (OR 1.9) and sun protection messages (OR 1.8) and the weakest (but still statistically significant) association was for anti-smoking messages (OR 1.3).

### Table 7.3: Unprompted message awareness by arts engagement status (n=1997)

<table>
<thead>
<tr>
<th>Message Type</th>
<th>Unprompted message awareness (%)</th>
<th>Message awareness by arts engagement (%)</th>
<th>Logistic Regression Model(s): Association between Arts Engagement and Message Awareness</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not Engaged*</td>
<td>Engaged</td>
<td>(1) Arts Engagement</td>
</tr>
<tr>
<td></td>
<td>OR</td>
<td>p-value</td>
<td>OR</td>
</tr>
<tr>
<td>Anti-smoking</td>
<td>47.3</td>
<td>42.1</td>
<td>49.7</td>
</tr>
<tr>
<td>Safe alcohol consumption</td>
<td>38.8</td>
<td>31.2</td>
<td>42.3</td>
</tr>
<tr>
<td>Physical activity</td>
<td>51.5</td>
<td>40.2</td>
<td>56.8</td>
</tr>
<tr>
<td>Sun protection</td>
<td>76.7</td>
<td>69.0</td>
<td>80.3</td>
</tr>
<tr>
<td>Nutrition</td>
<td>47.9</td>
<td>38.5</td>
<td>52.2</td>
</tr>
</tbody>
</table>

* Reference group

### 7.5 DISCUSSION

Health promotion organisations, such as Healthway, use sponsorship to purchase the promotion of health messages that are consistent with local and nationally agreed health goals, targets and strategies.[74] Since 1991, Healthway, in partnership with various government and non-government organisations, have exposed the Western
Australian population to health messages at hundreds of sponsored community arts events. As a result, it was postulated that in Western Australia, those who engaged in the arts would have a higher level of exposure to and therefore a higher level of awareness for promoted health messages, compared to those not engaged in the arts. The results of this study found that members of the Western Australian community who had engaged in the arts in the previous 12 months, did in fact exhibit greater levels of awareness for sponsored health messages compared with those not engaged in the arts even after accounting for gender, age group, income, location and sports engagement. For all messages, adjustment for gender, age group, income, location and sports engagement slightly attenuated the strength of the association, however, the difference in awareness for those engaged or not engaged in the arts was still statistically significant, suggesting an independent effect.

Previous research indicated an association between health message exposure at sports events and message awareness.[75, 78] In this study, a significant association between message awareness and arts engagement (independent of gender, age group, income, location and sports engagement) was apparent for messages relating to anti-smoking, physical activity, nutrition, safe alcohol consumption and sun protection, with the largest difference in awareness for those engaged or not engaged in the arts occurring for physical activity messages. This is encouraging, as previous to 2006, one of the primary health messages promoted by Healthway at sponsored arts events was the “Be Active” message to encourage people to be more physically active. However, given the different levels of recall for the different messages, further research should investigate if message type, sponsorship amount (e.g. large versus small dollar value), event type (e.g. large versus small event) or differences in the way messages are conveyed to arts audiences (e.g. signage, announcements, merchandise) are the reason for variations in recall. To extend study findings, further research should also be conducted to look at the association between arts engagement and behavioural change as predicted by various communication-behavioural change models.

Strengths of this study include its large sample size and that respondent demographics were representative of the Western Australian population in terms of age group, gender, and location. The cross-sectional nature of the data was a limitation as it
precluded our ability to determine causality. As this study was a secondary analysis of Healthway’s survey of Community Recreation and Health we could only control for those demographic questions asked in the survey. Questions relating to education and occupation were not asked and therefore not controlled in the analysis, however, household income (which was controlled) may indirectly reflect the combination of education and occupation. It should be noted that although the observed differences found in this study were positive, there are a number of other ways in which health messages are promoted to the general public that were not measured or adjusted for in the analysis. That is, in this study, only the influence of sports engagement was controlled for, whereas the confounding effect of workplace, school, media and other community based activities in which health messages are promoted were not. Future studies should also consider and account for these activities, as like sports engagement they too may attenuate the association between arts engagement and health message awareness. With these limitations in mind, in this study, those engaged in the arts were found to be significantly more likely to be aware of health messages than those not engaged in the arts, suggesting that those attending arts events were systematically different from other members of the population and/or that the arts were an effective setting for promoting health messages to the general population. As the information provided in this study is relevant to both arts organisations and organisations that sponsor the arts, findings should be taken into account when making funding decisions as it would appear that the arts have merit beyond intrinsic artistic value and are a viable means of promoting health messages to the general population.
Chapter 8

Health in Arts - Are arts settings better than sports settings for promoting anti-smoking messages?
Chapter 8: HEALTH IN ARTS - ARE ARTS SETTINGS BETTER THAN SPORT SETTINGS FOR PROMOTING ANTI-SMOKING MESSAGES?

8.0 PREFACE

This chapter evaluates the effectiveness of health in arts by measuring the cognitive impact (message awareness, comprehension, acceptance and intention) of promoting anti-smoking messages at arts events, and comparing findings to sports events, a more traditional health promotion setting. A secondary analysis of the Healthway Sponsorship Monitor data was conducted. This chapter describes the aims of the research, method, secondary analysis, results and discussion. This chapter was e-published in 2013 in ‘Perspectives in Public Health’ (Figure 8.1). The chapter is presented as it appears in the journal on the date of publication.

Figure 8.1: Davies C et al (2013). Health in Arts: Are arts settings better than sports settings for promoting anti-smoking messages? Perspectives in Public Health. Available from http://rsh.sagepub.com/content/early/2013/10/16/1757913913502475.
8.1 ABSTRACT

Aim:
Tobacco smoking is a leading cause of preventable mortality and morbidity. Since 1991, the Western Australian Health Promotion Foundation (Healthway) has sponsored the arts and sport in exchange for cigarette smoke-free events, smoke-free policies and the promotion of anti-smoking messages (e.g. Quit, Smoke Free or Smarter than Smoking). As health promoters often look for innovative and effective settings to advocate health, and as the approach of sponsoring the arts to promote health to the general population is uncommon, the purpose of this study was to evaluate the effectiveness of ‘Health in Arts’ by measuring the cognitive impact (message awareness, comprehension, acceptance and intention) of promoting anti-smoking messages at arts events, and comparing findings to sports events, a more traditional health promotion setting.

Method:
A secondary analysis of the 2004-2009 Healthway Sponsorship Monitor data was conducted. Twelve arts events (n=592 respondents) and nine sports events (n=420 respondents) sponsored by Healthway to promote an anti-smoking message were evaluated. The study was cross sectional in design. Participants were residents of Western Australia aged 15+ years and attended events as part of an audience or as a spectator. Descriptive and regression analyses were conducted.

Results:
After adjustment for demographic variables, smoking status and clustering, arts events were found to be as effective in promoting anti-smoking message awareness, comprehension, acceptance, and twice as effective on intention to act (p=0.03) compared with sports events.

Conclusion:
This study provides evidence of the effectiveness of arts sponsorship to promote health to the general population, i.e. health in arts. Promoting an anti-smoking message in arts settings was as or more effective than in sports settings. Results suggest the arts should be utilised to communicate and reinforce anti-smoking messages to the general population. The suitability of the arts to promote other types of health messages should be investigated further.
8.2 BACKGROUND

Encouraging healthy lifestyles, healthful settings and modifying unhealthy behaviours, such as smoking, is a primary goal of health promotion. In Australia, tobacco smoking is the single most preventable cause of death, disability and ill health.[135, 136] In 2010, approximately 15% of Australian adults (2.8 million people) and 12% of Western Australian adults smoked on a daily basis.[137, 138] Although Australia’s prevalence of smoking is declining, when compared with other health risk factors such as overweight/obesity, high blood pressure and physical inactivity, smoking is still responsible for the greatest burden of disease[139] and the highest social cost (AUD$31.5 billion in 2004/2005).[140]

A ‘setting’ can be defined as a place or social context where environmental, organisational and personal factors interact to affect wellbeing.[71] Working in non-medical settings such as schools, workplaces and recreational environments constitutes an important dimension of health promotion policy and practice.[72] Methods to promote health include enviro-structural changes, or a setting can be used to promote health to a specific target group or to the wider community.[141] Since 1991, the Western Australian Health Promotion Foundation (Healthway) has sponsored arts organisations and sports organisations to promote health.[4, 74] Health promotion sponsorship can be defined as the provision of funding in exchange for health related sponsor benefits that aim to achieve health rather than commercial or monetary outcomes.[74-77] In Australia, a number of factors have facilitated the adoption of sponsorship by health promoters, including the high cost of media advertising, the synergy between the goals of health promoters and community organisations, and because sponsorship is often within the budget of most health agencies.[78]

Funded via a tax on tobacco products, Healthway provides sponsorship funding to arts and sports organisations in exchange for the implementation of healthful environments (e.g. cigarette smoke-free events, tobacco control policies) and the promotion of a single health message relating to smoking, nutrition, physical activity, safe alcohol consumption or sun protection.[4] Methods used to promote health messages include the use of signage (e.g. large billboards on the inside and outside
walls of a venue, perimeter fence signage, banners, posters), announcements (public address system, performer/athlete endorsements, celebrity acknowledgements), leaflets about health behaviours/health conditions, event naming rights, program advertisements or editorials, health messages on admission tickets, promotional clothing (e.g. T-shirts, hats) and campaign merchandise (e.g. water bottles, key rings, stickers). Healthway’s sponsorship program is guided by social marketing and communication–behaviour change models that aim to influence the health message awareness, comprehension, acceptance and behavioural intentions of people attending (e.g. spectators, audience) or taking part in (e.g. participants, staff) a sponsored event.[82, 132] By promoting a health message, Healthway aims to have a cognitive impact on those engaged in a sponsored arts or sport event so as to encourage positive health behaviours.

8.2.1 Health promotion sponsorship via the arts and sport

Engaging in the arts and/or sport are popular pastimes for many Australians. In 2009-10, 67% of Australian adults attended the cinema, 43% attended a sports event, 30% attended popular music concerts and 26% attended art galleries.[142, 143] Due to the population reach of arts and sports events and the adverse health risk-factor profiles exhibited by many people who engage in the arts and/or sports, these settings are ideal for health promotion interventions.[74, 79, 80] Between 2004 and 2009, Healthway sponsored more than 4300 community arts or sports projects to the value of AUD $57 million.[144] During this time, 713 projects (400 arts, 313 sport) specifically targeted tobacco smoking with the promotion of anti-smoking health messages such as ‘QUIT’ (www.quitnow.gov.au), ‘Smarter than Smoking’ (www.smarterthan smoking.org.au) and ‘Smoke Free’ (www.oxygen.org.au/smokefree). Healthway’s messages were aligned with health campaigns run by both national and state government departments and health agencies.[4]

In Australia, numerous studies have been conducted about the effectiveness of sponsorship agreements between health agencies and sports organisations in relation to health message awareness,[75, 78] attitudes,[85] behaviour,[86] and the creation of healthful sporting environments.[77] In recent years, the arts (e.g. performing arts; literature; visual arts/design/craft; online/digital/electronic arts and
community/cultural festivals or fairs) have received increasing attention as a setting in which to encourage health. Although arts and health sponsorship agreements to promote messages about physical activity, anti-smoking, sun protection, nutrition and safe alcohol consumption have been found to be effective, little is known about the cognitive impact of health messages at arts events, especially agreement with or understanding of a message, and resulting behavioural intentions. For the past 20 years, Healthway has sponsored the arts in exchange for the promotion of anti-smoking messages, smoke-free events and the implementation of smoke-free policies. This ‘Health in Arts’ approach is relatively unique to Western Australia, as the arts are not funded for their therapeutic benefit, but instead sponsored to ensure that the environment at the event is healthy (e.g. cigarette smoke free) and utilised to promote a health message to people engaged in the event. If found to be effective, this is a model that could be used elsewhere and extends the idea of ‘Arts in Health’, which is often associated with arts activities in a setting (e.g. hospitals, primary care, community centres) to heal or encourage wellbeing, rather than the arts being the setting that is adapted to be more health enhancing and/or used as a conduit to gain access and promote health to people who voluntarily attend an event. In effect, the arts are being utilised as a site for public health interventions and health promotion programs. With this in mind, the aim of this study was to build on previous research and evaluate the effectiveness of the arts as a health promotion setting by measuring the cognitive impact (i.e. message awareness, comprehension/acceptance and intention) of anti-smoking messages at Healthway sponsored arts events and to compare findings to those achieved at sports events, a more traditional and established health promotion setting.

8.3 METHOD
A secondary analysis of Healthway’s Sponsorship Monitor evaluation data was conducted. The aim of the sponsorship monitor is to ascertain the overall effectiveness of Healthway’s sponsorship program by evaluating a selection of projects which receive a sponsorship of AUD$25,000 or more. Between 2004 and 2009, 12 arts events (i.e. visual arts, performing arts, festivals, n=592 respondents) and 9 sports events (hockey, netball, car racing, n=420 respondents) that promoted a single anti-smoking message (e.g. QUIT, Smoke free or Smarter than Smoking) were evaluated. At each
event, a cross-section of approximately 50 Western Australian adults, aged 15 years and over were selected at random and asked to complete a previously established, self-administered, paper-based survey. Participants were approached by trained survey staff in an interval/break or at the end of a performance/game so as not to disrupt them from their event and also to give the promoted message time to be noticed by and influence the respondent. Participants attended their respective event as a spectator or as part of an audience therefore, engagement in the arts or sports event was passive. The survey asked cognitive impact, health behaviour and demographic questions. With regard to cognitive impact, participants were asked whether they recalled seeing or hearing any health messages at the event (i.e. awareness). Respondents who were aware of an anti-smoking message were asked what they thought the message meant and if they agreed with the message (i.e. comprehension and acceptance). Respondents were then asked if the anti-smoking message had caused them to think about doing something related to the message (i.e. intention). The question about message acceptance asked for a yes/no response, while the comprehension question was open-ended and later coded as correct/incorrect. The awareness and intention questions also asked for a yes/no response and if “yes”, asked respondents to specify which message(s) they saw or heard (awareness) and what they intended to do (intention). It should be noted that intentions included anti-smoking outcomes related to the respondent and to encouraging others to adopt or continue a non-smoking behaviour. The data were analysed using SPSS for Windows (Version 17) and SAS Statistical Software (Version 9.3). The analysis first involved a descriptive investigation of the demographic, health behaviour, and cognitive impact data followed by a chi square analysis to test for differences by arts and sports events. Two logistic regression models were then fitted for each cognitive impact variable to compare the impact of anti-smoking messages at arts events and sports events. The first model estimated the direct (unadjusted) arts vs sports odds ratio comparing the cognitive impact of anti-smoking messages; the second model estimated the arts vs sports odds ratio after adjustment for age, gender, data collection year and smoking status. As evidence of an intra-cluster correlation within event was found for awareness (r=0.14), but not for other levels of cognitive impact, clustering was taken into account for this variable. Permission to conduct this study was granted by The University of Western Australia Human Research Ethics Committee.
8.4 RESULTS

In total, 1012 adults participated in this study. As shown in Table 8.1, half of all participants were female (56%), with 52% aged between 15-29 years, 29% aged between 30-49 years and 16% aged 50 years and over. When the 592 respondents who attended an arts event and the 420 respondents who attended a sports event were compared, it was found that a higher percentage of females were surveyed in the arts compared to sport ($\chi^2 = 33.0$, df=1, $p=0.000$) and arts respondents were younger than sports respondents ($\chi^2 = 17.6$, df=2, $p=0.000$).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Level</th>
<th>Total</th>
<th>Sport</th>
<th>Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>$n$</td>
<td>%</td>
<td>$n$</td>
</tr>
<tr>
<td>Gender</td>
<td>Male</td>
<td>407</td>
<td>40.2</td>
<td>215</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>567</td>
<td>56.0</td>
<td>195</td>
</tr>
<tr>
<td></td>
<td>Missing</td>
<td>38</td>
<td>3.8</td>
<td>19</td>
</tr>
<tr>
<td>Age group</td>
<td>15 to 29 years</td>
<td>530</td>
<td>52.4</td>
<td>196</td>
</tr>
<tr>
<td></td>
<td>30 to 49 years</td>
<td>292</td>
<td>28.9</td>
<td>151</td>
</tr>
<tr>
<td></td>
<td>50 years and over</td>
<td>160</td>
<td>15.8</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td>Missing</td>
<td>30</td>
<td>3.0</td>
<td>14</td>
</tr>
<tr>
<td>Smoking status</td>
<td>Smoker</td>
<td>116</td>
<td>11.5</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td>Non smoker</td>
<td>873</td>
<td>86.3</td>
<td>351</td>
</tr>
<tr>
<td></td>
<td>Missing</td>
<td>23</td>
<td>2.3</td>
<td>14</td>
</tr>
<tr>
<td>Exercise status</td>
<td>No Exercise</td>
<td>107</td>
<td>10.6</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>Some exercise</td>
<td>493</td>
<td>48.7</td>
<td>187</td>
</tr>
<tr>
<td></td>
<td>At recommended levels (i.e. 150mins walking or moderate exercise on 5 or more days in the previous week or 60mins of vigorous activity in the previous week)</td>
<td>325</td>
<td>32.1</td>
<td>129</td>
</tr>
<tr>
<td></td>
<td>Missing</td>
<td>87</td>
<td>8.6</td>
<td></td>
</tr>
<tr>
<td>Fruit and vegetable status</td>
<td>Low on both</td>
<td>572</td>
<td>56.5</td>
<td>220</td>
</tr>
<tr>
<td></td>
<td>Low on one</td>
<td>193</td>
<td>19.1</td>
<td>68</td>
</tr>
<tr>
<td></td>
<td>At recommended levels (i.e. 2 serves of fruit and 5 serves of vegetables each day in the previous week)</td>
<td>162</td>
<td>16.0</td>
<td>68</td>
</tr>
<tr>
<td></td>
<td>Missing</td>
<td>85</td>
<td>8.4</td>
<td></td>
</tr>
<tr>
<td>Alcohol status</td>
<td>Unsafe drinker (i.e. consumption of 5 or more drinks if male or 3 or more drinks if female on any day in the previous week)</td>
<td>161</td>
<td>15.9</td>
<td>75</td>
</tr>
<tr>
<td></td>
<td>Safe drinker</td>
<td>379</td>
<td>37.5</td>
<td>163</td>
</tr>
<tr>
<td></td>
<td>Missing</td>
<td>472</td>
<td>46.6</td>
<td></td>
</tr>
<tr>
<td>Sun burn status</td>
<td>Sunburnt in the last 12 months</td>
<td>683</td>
<td>67.5</td>
<td>278</td>
</tr>
<tr>
<td></td>
<td>No Sunburnt in the last 12 months</td>
<td>301</td>
<td>29.7</td>
<td>131</td>
</tr>
<tr>
<td></td>
<td>Missing</td>
<td>28</td>
<td>2.8</td>
<td></td>
</tr>
<tr>
<td>Data collection year</td>
<td>2004/5</td>
<td>219</td>
<td>21.6</td>
<td>108</td>
</tr>
<tr>
<td></td>
<td>2006/7</td>
<td>337</td>
<td>33.3</td>
<td>84</td>
</tr>
<tr>
<td></td>
<td>2008/9</td>
<td>456</td>
<td>45.1</td>
<td>228</td>
</tr>
<tr>
<td>Message promoted at event</td>
<td>Quit</td>
<td>222</td>
<td>21.9</td>
<td>222</td>
</tr>
<tr>
<td></td>
<td>Smoke Free</td>
<td>374</td>
<td>37.0</td>
<td>51</td>
</tr>
<tr>
<td></td>
<td>Smarter than Smoking</td>
<td>416</td>
<td>41.1</td>
<td>147</td>
</tr>
<tr>
<td>Type of Event</td>
<td>Arts – Visual arts exhibition (sculpture)</td>
<td>56</td>
<td>5.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Arts – Performance (dance, music)</td>
<td>338</td>
<td>33.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Arts – Festival</td>
<td>198</td>
<td>19.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sports – Racing event (car, rally car)</td>
<td>278</td>
<td>27.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sports – Ball sports event (hockey, netball)</td>
<td>142</td>
<td>14.0</td>
<td></td>
</tr>
</tbody>
</table>
Overall, a higher number of sports surveys were collected in 2008/9 and a higher number of arts surveys in 2006/7 ($\chi^2 = 57.21$, df=2, $p=0.000$). Also, the arts were more likely to receive the Smarter than Smoking message, while only sport received the Quit message. With regard to health behaviours, sports respondents (15%) were more likely to be smokers than arts respondents (9%) ($\chi^2 = 9.42$, df=1, $p=0.002$). With regard to other health behaviours, most arts and sport respondents reported getting sunburnt in the last 12 months (Arts=70%, Sport=68%), as well as exercising (Arts=66%, Sports=64%) and consuming fruit/vegetables (Arts=84%, Sport=81%) below recommended levels. In addition, almost one third of arts and sports respondents reported drinking alcohol at unsafe levels (Arts=28%, Sport=32%).

8.4.1 Cognitive impact

Overall, 70% of arts and 52% of sports respondents were aware of an anti-smoking message promoted at the event they attended (Table 8.2).

<table>
<thead>
<tr>
<th>Measures of Cognitive Impact</th>
<th>Total</th>
<th>Arts (n=592)</th>
<th>Sport (n=420)</th>
<th>Odds Ratio</th>
<th>Adjusted Odds Ratio (age, sex, smoker, year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness (% of those surveyed and who responded to the question, n=1012)</td>
<td>631 62.4</td>
<td>412 69.6</td>
<td>219 52.1</td>
<td>2.10 (CI: 1.62-2.72)</td>
<td>1.87* (CI: 0.88-3.94)</td>
</tr>
<tr>
<td>Comprehension &amp; Acceptance (% of those who were aware of the message and who responded to the question, n=499)</td>
<td>442 88.6</td>
<td>288 88.6</td>
<td>154 88.5</td>
<td>1.01 (CI: 0.57-1.80)</td>
<td>0.97 (CI: 0.51-1.85)</td>
</tr>
<tr>
<td>Intention (% of those who comprehend/accepted the message and who responded to the question, n=423)</td>
<td>96 22.7</td>
<td>71 26.3</td>
<td>25 16.3</td>
<td>1.83 (CI: 1.10-3.03)</td>
<td>1.84 (CI: 1.08-3.13)</td>
</tr>
</tbody>
</table>

*Evidence of an intra-cluster correlation by event was found for awareness and accounted for in the analysis. Intra-cluster correlation was not found for other levels of cognitive impact.

Of those aware of a message, most saw the message being promoted on venue signage (Arts: signage=47%, announcement=14%, merchandise=4%; Sport: signage=60%, announcement=5%, merchandise=6%). Comprehension and acceptance of the message was high at both events. As a result of exposure to the message, 26% of arts and 16% of sports respondents who were aware of the message and who comprehended/accepted the message formed an intention to act on the message.
Respondents at sports events mostly formed intentions about quitting smoking, reducing the number of cigarettes they smoked or not taking up the habit. Arts respondents mostly formed intentions around encouraging others not to smoke and not taking up the habit. After adjustment for age, gender, smoking status and year, it was found that promoting anti-smoking messages at arts events was as effective on awareness, comprehension/acceptance, and more effective on intention (p=0.03), than promoting messages at sports events. Adjustment for age, gender, smoking status, and year was found to attenuate the estimated odds ratio for awareness, however this was not the case for comprehension/acceptance or intention.

8.5 DISCUSSION

The objective of this study was to evaluate the effectiveness of ‘Health in Arts’, that is, the value of the arts as a health promotion setting, by measuring the cognitive impact of anti-smoking messages at Healthway sponsored arts events and to compare these findings to those achieved at sports events sponsored during the same time period. Sport was chosen as the comparison group as sports settings have been established as an effective site for health promotion interventions.[75, 78, 85] In this study, almost three out of four arts respondents were aware of the anti-smoking message promoted at the event they attended, with venue signage being the most recalled sponsorship method. The use of signage as a valuable strategy to communicate a message to people attending an event has also been found in other studies.[147, 148] When compared to sports events funded during the same time period and after adjustment for gender, age, smoking status, year and clustering within event (awareness only), it was found that promoting anti-smoking messages to adults at arts events were as effective on message awareness, comprehension, acceptance and significantly more effective in terms of intention, than promoting messages at sports events. This is encouraging and suggests that in addition to sports events, the arts should be used as a health promotion setting to advocate and disseminate anti-smoking messages to adults. Future studies may wish to compare individual messages to establish which are the most effective overall and by art form. A possible explanation for the apparent superiority of the arts over sport to influence behavioural intentions, could be because health sponsors and health promotion messages at arts events are relatively novel. If
noticed, health messages in arts settings appear to have more of a cognitive impact compared to sports settings where health sponsorship and the promotion of health messages is less novel, expected and more commonplace. In terms of the analysis, evidence of intra-cluster correlation was found for awareness, but not for other levels of cognitive impact. This implies that the level of message awareness was similar for people attending the same event. Given that people attending the same event should receive similar levels of exposure to a message, this finding is reasonable and should be considered by others when analysing similar types of data.

Many people who engage in the arts exhibit a mix of healthy and unhealthy behaviours. In countries where involvement in the arts, either as an active participant or as a member of an audience is common, these settings could be useful to health professionals to gain access to and promote health to a variety of people. In this as well as other studies, health risk factors such as sunburn, physical inactivity, and suboptimal fruit/vegetable consumption were found to be below recommended levels for most respondents.[79, 80] In addition, respondents attending arts events (9%) were less likely than sports respondents (15%) to be smokers. Over the same time period (2004 to 2009), arts respondents were also less likely than those in the Australian and Western Australian population to smoke (15-20%).[137, 138] It is therefore debatable whether an anti-smoking message was the most appropriate health message to be promoted at an arts event. It could be argued that it would have been more strategic and cost effective to target different health risk factors (e.g. sunburn, physical inactivity, suboptimal fruit/vegetable consumption). However, given that arts respondents mostly formed intentions around convincing others not to smoke and not taking up the habit themselves, the decision to promote an anti-smoking message should be seen as worthwhile, as it encouraged the maintenance of a positive health behaviour (i.e. cigarette smoking abstinence) and advocacy whereby behaviour change not only relates to subjective actions but also to actions that encourage others to adopt or continue a recommended behaviour.[149]

Strengths of this study include the large sample size and the direct comparison with sports events. Limitations included the cross-sectional nature of the data which precluded our ability to determine causality and that short or long term self-reported
intentions could not be verified. Also, as this study was a secondary analysis of the Healthway Sponsorship Monitor evaluation data, we could only control for those demographic and health behaviour questions asked in the existing survey. Questions relating to education were not asked and therefore not included in the analysis. Finally, only the cognitive impact of anti-smoking messages was compared. Future studies should look at the suitability of the arts to promote other types of health message and health behaviours, such as sun protection, fruit/vegetable consumption, physical activity and safe consumption of alcohol. Although not explored in this study, future studies could also look at the effectiveness of and compliance with enviro-structural strategies (e.g. cigarette smoke free events) used to create healthful environments at sponsored arts events.

8.5.1 Conclusion

With these limitations in mind, when compared to sports events, those engaged in the arts were as aware of anti-smoking messages, had similar comprehension/acceptance and were significantly more likely to form an intention to act on the promoted anti-smoking message. This finding should be of interest to health professionals and suggests that the arts are a viable and effective setting for promoting and reinforcing anti-smoking messages to the general population. As results from this ‘Health in Arts’ study are relevant to both arts organizations and organizations that sponsor the arts, findings should be taken into account when applying for grants or making funding decisions as it would appear that the arts are more than just a therapy or recreational pastime, but are a feasible and effective setting in which to promote health.
Title: Water

Acrylic on canvas (40cm x 60cm)
This painting was created by the candidate during the course of the PhD
Chapter 9

General discussion and conclusions
Chapter 9: GENERAL DISCUSSION & CONCLUSION

9.1 INTRODUCTION

This PhD explored the relationship between arts engagement and health in the general population by investigating two concepts: ‘Arts for Health’ and ‘Health in Arts’. An important aspect of this work and an important point of difference with much of the previous health-arts literature is that the focus was on the general population and on the art people do as part of their everyday life (for enjoyment, entertainment or as a hobby) rather than therapy or specific art programs for clinical populations or specific target groups.

This study developed a clear and measurable definition of arts engagement for population based research. A conceptual health-arts framework that is underpinned by the biopsychosocial model of health,[40] the positive psychology paradigm[41] and theories of social epidemiology[42] was then developed (Arts for Health). The definition and framework then enabled a population based survey of arts and health that provided a detailed measure of the prevalence and a quantification of the association between arts engagement and mental wellbeing (Arts for Health). As guided by McGuire’s communication-behaviour change model[82] the viability of the arts as a setting to promote health messages to the general population was assessed via two studies based on a secondary analysis of existing Healthway data. These two studies make up the Health in Arts component of the PhD and provide strong support for the use of arts events/venues as a health promotion setting. This final chapter summarises and discusses the most important findings from this PhD including implications for policy, practice and future research. This chapter begins by discussing the strengths and limitations of the studies conducted in this PhD.

9.2 STRENGTHS AND LIMITATIONS OF THIS STUDY

9.2.1 Online survey of experts

Two online surveys of experts in the field of arts and arts/health were conducted to create a definition of arts engagement for population based research. The strengths of
this study were that the definition of arts engagement was: (1) guided by a scientific approach, (2) directed by the informed opinion of experts, and (3) the scope of the survey was international (i.e. Australia, US, Canada and Europe). Although the views of experts are a reasonable starting point and commonly used to develop definitions, this could also be seen as a limitation due to the subjective way art forms, activities and measures of engagement were identified and rated (i.e. information bias). It is possible that if a different group were surveyed (e.g. the general public, health professionals, arts students, etc.) that a different definition of engagement may have emerged. Also, although the response rates achieved in the surveys (survey 1= 44%; survey 2= 57%) were higher than typically achieved for online surveys (i.e. 30-40%) this remains a second limitation of this study.

9.2.2 Interviews with members of the general population

Semi-structured interviews with members of the general population were conducted to develop a health-arts framework. To reduce selection bias and increase sample credibility, a strength of this study was that interviewees were randomly selected from a pool of nominees and all participants invited to take part in an interview did so (100% response rate). Overall, nominees and interviewees reported similar levels of arts engagement (88%) to that reported for the general population in 2009-10 by the Western Australian Department of Culture and the Arts.[96] The sample was also representative of the Western Australian population in terms of metropolitan or rural location however, a limitation was that there was an over representation of females and people with a university or higher degree. This is likely the result of the purposive sampling technique employed to recruit nominees, especially via university email lists. A further limitation was that interviewees were specifically asked how arts engagement makes people feel therefore possibly causing an information bias towards mental health outcomes. A strength of this study was that the scope and depth of the interviews conducted were sufficient to provide a comprehensive account of the health-arts relationship that permitted the development of a clear, succinct and user-friendly framework. A further strength was that possible confounders and effect-modifiers to the health-arts relationship were identified.
9.2.3 Healthy arts telephone survey
A telephone survey of Western Australian members of the general population was conducted to measure the prevalence of arts engagement and to quantify the relationship between arts engagement and mental health. Whilst state-of-the-art telephone based sampling and recruitment methods were used, there is the possibility of selection bias, as compared to the Western Australian population, there was an over representation of people with a university/higher degree, older adults and people without children in their household. The sample was however representative of the Western Australian population in terms of gender, location, income, marriage and sports engagement. Strengths of this survey include its large sample size (n=702), high response rate (71%), detailed quantification of arts engagement (hours per year) and adjustment for 11 confounders and effect modifiers to the relationship between mental health and arts engagement (i.e. age, sex, location, income, education, marital status, children, general health, holidays from work, engagement in sport and religious events/activities). However, as this study was cross-sectional in design all relationships are associations that are not necessarily causal.

9.2.4 The viability of the arts as a health promotion setting
A secondary analysis of the 2006 Healthway survey of Community Recreation and Health and the 2004-2009 Healthway Sponsorship Monitor was conducted to assess if the arts were a viable setting to promote health messages to the general population. A strength of both studies was the rigorous sampling and data collection methodologies and their large sample size. However, the cross-sectional nature of the data was a limitation as it precluded the ability to determine causality. As both studies were secondary analyses of Healthway data, a second limitation was that only variables asked in the existing surveys could be controlled for. For example, questions relating to education were not asked and therefore not included in the analysis.

9.3 MAIN STUDY FINDINGS, IMPLICATIONS & FUTURE RESEARCH

9.3.1 Definition of arts engagement (Chapter 4)
Via the views, knowledge and informed opinion of international experts, a scientific approach was utilised to elucidate key terminology and concepts to create a comprehensive definition of arts engagement for population based health research.
Arts engagement was defined as active or passive involvement in creative events or activities within a variety of art forms (i.e. 1. performing arts; 2. visual arts, design and craft; 3. community/cultural festivals, fairs and events; 4. literature; and 5. online, digital and electronic arts) and measured via 91 activities. These art forms operate independently, but also collaborate, communicate and intersect in their arts practice. Each of the 91 activities were quantified in terms of level or amount of arts engagement experienced by a person taking part in that activity (i.e. intensity of arts engagement).

9.3.1.1 Policy & Practice Implications

- A population based definition of arts engagement is now available to health professionals, funding organisations, artists and arts organisations to encourage a common language, increase understanding and facilitate constructive dialogues.
- A definition of arts engagement is useful to organisations interested in arts related philanthropy/sponsorship/grants to guide their funding models, application (inclusion) processes and funding decisions (i.e. the types of organisations/activities that are or are not the arts and therefore should/should not be funded).

9.3.1.2 Research Implications

- A comprehensive definition of arts engagement is now available for use in population based research studies. Clarification of art forms and a comprehensive list of activities is useful to researchers in the field of population health, the arts or arts-health, especially in the development of surveys to precisely estimate prevalence and levels of arts engagement.
- The emerging art form of online, digital and electronic arts was confirmed to be an art form in its own right. This art form and related activities should be considered and included when conducting future research.
- It is not enough to simply ask respondents if they ‘attend the cinema’ or if they ‘watch television’ as type of show (i.e. arts versus mainstream) was found to impart different levels of arts engagement. This should be considered when conducting population based research and designing arts engagement survey items to increase the reliability of the data collected.
• This study provided a measure of arts engagement by activity. This measure is useful for future studies investigating the dose-response relationship between arts engagement and health.

9.3.1.3 Future research

• Five art forms were identified in this study. Future research could look at patterns of engagement to see if those who engage in the arts have a narrow focus (i.e. engage in only one art form or activity) or a broad focus (i.e. engage in many art forms and activities).

• There is a growing interest in understanding the contribution of different art forms on health. Future research could look at both the individual and the cumulative health effects of engaging in one or more of the five art forms.

• There is a growing interest in understanding the contribution of active versus passive arts activities on health. Studies should be conducted to look at the effect of active (only), passive (only) and both active/passive engagement on health. Future research could also look at the differences in health resulting from professional versus amateur arts engagement.

9.3.2 Health-Arts conceptual framework (Chapter 5 -Arts for health)

Interviews with members of the general population facilitated the creation of a conceptual health-art framework. Overall, this framework should be viewed as a starting point and should provoke conversation, debate and further research. The framework contained seven outcome themes of which three related to health, i.e. mental health, social health, physical health and four health determinants, i.e. economic, knowledge, art and identity outcomes. Within each theme, positive, negative and unintended outcomes of public and individual consequence were identified as were possible confounding and/or effect modifying variables. It is expected that in time, the framework will need to be reviewed as we learn more about the relationship between arts engagement and general population health.

9.3.2.1 Policy & Practice Implications

• A health-arts framework is of value to health professionals interested in understanding the health-arts relationship, especially those who use social prescribing for health promotion or to complement treatments. As arts
outcomes can be both positive and negative, this should be considered when suggesting or prescribing creative events and activities.

- Members of the general population may not realise the potential impact of arts engagement for health promotion, health maintenance and/or healing. The framework could be used (e.g. by health professionals and artists) to explain and increase understanding of arts related outcomes.
- As the arts have the potential to positively influence general population mental, social, physical health and health determinants they have the potential to reduce pressure on health systems and resources.
- A health-arts framework is of value in teaching medical, nursing, health, science and arts students about the value of arts engagement in achieving better positive health outcomes.
- A health-arts framework is useful to artists and health professionals in the development, implementation and evaluation of policy and programs.
- The framework could be used by health promotion agencies to tailor their campaigns and activities.
- As arts events can be places where negative health behaviours occur (e.g. excessive alcohol consumption and exposure to second-hand smoke), health organisations should sponsor the arts to encourage healthy environments and promote health to arts audiences and participants.

9.3.2.2 Research Implications

- A health-arts framework and the identification of possible health-arts confounders/effect modifiers is of value to researchers seeking to build the evidence base and is a step towards the conceptualisation of a causal arts and health model. The framework is especially of value in guiding the design and data analysis of future health-arts studies.
- As the focus of the framework was the general population and the art people do as part of their everyday lives, this enables a population health approach to research that can be used to guide future health-arts studies.

9.3.2.3 Future Research

- Mental health and social health were mentioned more frequently than other outcomes. This suggests that arts engagement may have greater impact on
mental and social health than other outcomes however, this hypothesis requires further investigation.

- Acknowledging the existence of confounders and effect-modifiers and accounting for them in future analyses, enhances our ability to avoid spurious conclusions about the health-arts relationship and assists us to more accurately quantify the magnitude of this relationship.
- To develop the framework into a theory, future research would need to confirm the existence and measure the strength of the relationships suggested by the framework between the arts and each outcome as well as identify direct and indirect mechanisms of action.
- Enablers and barriers to arts engagement should be considered and added to the framework.

9.3.3 Quantification of the relationship between arts engagement and mental wellbeing (Chapter 6 -Arts for health)

Via data collected as part of the ‘Healthy Arts’ telephone survey, the relationship between arts engagement and mental wellbeing was quantified. This is a shift in the focus of mental health research, which is usually on illness and treatment, towards general population wellbeing. The overall prevalence of arts engagement was 83% and reflective of the Australian population. After adjustment for demographics, general health, holidays from work, sports participation and religious engagement, the mental health-arts relationship was found to be nonlinear with evidence of a minimum threshold level of 100+ hours/year (i.e. 2 or more hours/week) of arts engagement associated with mental wellbeing.

9.3.3.1 Policy & Practice Implications

- A better understanding of the relationship between arts engagement and mental wellbeing is of value to clinicians and health/social care professionals who use arts activities/events to treat general population clients (e.g. social prescribing or arts on prescription). When prescribing creative events and activities as a complement to traditional treatments, clinicians and
health/social care professionals should be aware that like medications, the ‘art dose’ is important in achieving positive benefits.

- Arts engagement for enjoyment, entertainment or as a hobby has an impact on good mental health. Results suggest that the **quantity** of arts engaged in (hours per year) is important to achieving good mental wellbeing. The finding that 100 or more hours/year (i.e. 2 or more hours/week) of arts engagement has the potential to promote, maintain and improve mental wellbeing in the general population is of value to health promoters in the development of health promotion campaigns and health messages (e.g. ‘Be Creative’). As with physical activity engagement,[129] time-specific health messages and campaigns via television, radio, print and electronic media could be used to promote health benefits to the general population.

- A better understanding of the relationship between arts engagement and mental wellbeing is useful to artists and health professionals in the development, implementation and evaluation of policy and programs.

- The establishment of a general population mental health-arts relationship is of significance to artists and arts organisations in terms of funding legitimacy.

- While this study controlled for possible confounders and effect modifiers such as income and education, the influence of social inequalities such as poverty, social position, poor educational opportunities and social problems (e.g. crime, homelessness) should be acknowledged as an obstacle to the benefits of arts engagement on mental health.

**9.3.3.2 Research Implications**

- Being able to reliably measure the amount of arts engagement is essential for researchers investigating the relationship between arts engagement and health. Now developed, the survey questions used to identify and assess amount (hours per year) of arts engagement can be used by other researchers. It would be valuable to implement the Healthy Arts telephone survey in other populations in Australia and overseas.

- Being able to demonstrate the strength of the mental health-arts relationship is necessary for researchers seeking to build the evidence base. The approach
adopted in this study can be used as a guide for quantifying the relationship with other health outcomes (e.g. social health and physical health).

9.3.3.3 Future Research

- The literature indicates that mental and emotional gains motivate people to persist in physical activity,[120] therefore further research should be conducted to see if this is also true of arts engagement, especially with regards to happiness, quality of life, and resilience to mental illness.
- This cross sectional study is a step towards establishing whether or not the mental health-arts relationship is causal. To extend the research, randomised interventions and longitudinal studies should now be conducted.
- Future research should extend current findings by assessing if active (e.g. making art) or passive (e.g. attendance) involvement has differential outcomes or if activities/events within specific art forms (e.g. visual versus performing arts) result in similar or different mental health benefits.
- Because arts engagement has also been linked with enhanced social health and physical activity,[8] further research should be conducted to quantify the amount of arts engagement needed to maximise these social and physical outcomes.
- To inform the debate about the importance of art ‘quality’ and ‘quantity’ further research should be conducted to see how people who obtain good mental health outcomes engage in the arts (e.g. do they produce/attend quality art?, Is art quantity more/less/as important as art quality?).

9.3.4 The viability of the arts as a health promotion setting (Chapter 7&8 –Health in Arts)

Working in a variety of settings (e.g. hospitals, schools, workplaces, recreational venues) constitutes an important dimension of health promotion policy and practice.[72] Via a secondary analysis of Healthway’s survey of ‘Community Recreation and Health’ and ‘Sponsorship Monitor’ data, arts events and venues were found to have merit beyond intrinsic artistic value and found to be a viable and effective setting in which to promote health messages to the general population (i.e. physical activity, sun protection, nutrition, safe alcohol consumption and anti-smoking
messages). In addition, *when directly compared to sports settings (a more traditional health setting)*, *arts events were found to be as effective in promoting anti-smoking message awareness, comprehension, acceptance, and twice as effective on intention to act on the message.*

**9.3.4.1 Policy & Practice Implications**

- In countries like Australia where involvement in the arts is high, health partnerships/sponsorship (between arts and health organisations) should be encouraged. Arts settings should be utilised by health professionals as a site for public health interventions and to communicate and reinforce health messages to the general population.

- The positive relationship between arts engagement and health should be considered by funding bodies that support arts organisations financially via philanthropy or sponsorship to promote access, participation and wellbeing.

- In this study, the use of signage was found to be the most effective strategy to communicate health messages to the general population at arts events. As health promotion budgets are finite, this is important for health promoters to know in terms of strategy and budget allocation.

**9.3.4.2 Research Implications**

- Evidence of intra-cluster correlation was found for awareness, but not for other levels of cognitive impact. This implies that the level of message awareness was similar for people attending the same event. Given that people attending the same event should receive similar levels of exposure to a message, this finding is reasonable and should be considered by others when analysing similar data.

**9.3.4.3 Future Research**

- Evaluation of arts settings to promote health messages should be conducted in other populations to see if our Australian findings can be replicated. The Western Australian context in which ‘health sponsorship’ agreements between Healthway and arts organisations are well established and therefore results may or may not be the same elsewhere.

- In this study, arts settings were compared to sports settings. Future research could also look at the effectiveness of promoting messages at arts events compared to other health settings (e.g. schools, hospitals, workplaces).
The promotion of anti-smoking messages at arts and sports events were compared in this study. Future research could also look at the effectiveness of other types of health promoting messages (e.g. physical activity, sun protection, nutrition, safe alcohol consumption and mental health).

Finally, only the impact of health messages was assessed in this study. Future studies could also look at the effectiveness of health policy and compliance with enviro-structural strategies that are also used by Healthway to create healthful environments at sponsored arts events.

9.4 CONCLUSION
This PhD was highly enjoyable to undertake and I hope was interesting and enjoyable to the reader. This PhD contributes to scholarship by bringing researchers closer to the development of a causal health-arts theory and highlighting the potential of the arts, not only to treat, but to promote, maintain and improve population health through direct engagement and as a setting. The thesis expands on current knowledge and extends the field of Arts and Health, health promotion, public health and the arts by providing a definition of arts engagement, a conceptual framework and by providing a population perspective of the relationship between arts engagement and public health. This study also extends beliefs about what underpins the health-arts relationship, as quantity (i.e. number of hours per year) of arts engagement for enjoyment, entertainment or as a hobby (which may not always be of a high quality) was found to be associated with mental wellbeing.

The findings contained within this thesis have direct implications for members of the general public, clinicians, health/social care professionals, health-arts researchers; policy makers and organisations that fund the arts to promoting general population health and/or arts participation. A better understanding of the relationship between health and the arts is also of value to artists and arts organisations to inform practice and funding strategies. If health is about flourishing, living well and more than the absence of illness and disability, then the arts may hold the key to meaningful improvements to wellbeing. Further research should therefore be encouraged as there is much still to be understood, especially with regard to health-arts knowledge and knowledge translation at a population level.
Title: Untitled

Acrylic on canvas (70cm x 100cm)
This painting was created by the candidate during the course of the PhD
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Title: Tetris

Acrylic on canvas (70cm x 90cm)
This painting was created by the candidate during the course of the PhD
Appendix A: Media
APPENDIX A: MEDIA

A1.1 MEDIA RELEASES


MEDI A STATEMENT

Wednesday 2 October 2013

IS ART AT THE HEART OF HEALTH?

We recognise the importance of nutrition and exercise to well-being, but how does art affect health? This is exactly the question PhD candidate Christina Davies at The University of Western Australia is asking.

“People may think it’s a bit self-indulgent to do something creative but what if art was good for you?” Ms Davies said. “Given the significant pressure on our health system, what if involvement in the arts holds the key to a new type of health promotion?”

The Healthway-funded study is the first internationally to assess the link between self-directed arts engagement (for enjoyment, entertainment or as a hobby) and general population health, including mental, social and physical health. The three-year study involves both international experts and members of the community and seeks to gain a holistic perspective of outcomes.

“Often when people come home from work they’ll listen to music or read a book,” Ms Davies said. “In their free time they might go to a festival, movie or concert and may enjoy photography or dancing. They may not realise it, but they are engaging with the arts when they do this.”

Ms Davies said there was a growing body of evidence that the arts can be used as a therapy but few studies have looked scientifically at how making or experiencing art affects the health of the general community.

“We have had a fantastic community response to our interviews and surveys, and we look forward in the not-too-distant future to sharing our findings,” she said.

Ms Davies, who has a Healthway scholarship and a background in psychology, evaluation and health promotion, is also a passionate artist, with interests in painting and photography.

Her supervisors are Associate Professor Michael Rosenberg and Winthrop Professor Matthew Knuiman, senior academics in health promotion and public health.

MEDIA REFERENCE

Christina Davies (UWA School of Population Health)
Michael Sinclair-Jones (UWA Public Affairs)  (+61 8) 6488 3229 / (+61 4) 00 700 783

For more information about UWA: www.uwa.edu.au
Arts Beats Sport for Healthier Living. Available at:

MEDIA STATEMENT

Friday 25 October 2013

ARTS BEAT SPORT FOR HEALTHIER LIVING

The arts are a great way to promote healthy living, according to researchers from The University of Western Australia.

“Smoking is a leading cause of preventable death and disability. Our study surveyed more than 1000 adults. We found people attending arts events to be more likely to form an intention to act on a promoted anti-smoking message than those at sports events,” said Christina Davies, PhD candidate from UWA’s School of Population Health.

“We found that the arts have merit beyond intrinsic artistic value and are a viable setting for promoting nutrition, physical activity, sun protection, safe alcohol consumption and anti-smoking to the community.”

According to Ms Davies this is good news for arts organisations. Sponsorship or partnerships with health organisations not only fits with the arts and health ethos of community well-being but could also be a source of much-needed funding for the arts.

“People who engage in community events exhibit a mix of healthy and unhealthy behaviours,” she said. “In countries like Australia where involvement in the arts is high, these settings should be used to promote health to the community. We found that venue signage and announcements were the most effective methods of promotion.”

The Healthway funded study was recently published in the international journal Perspectives in Public Health. Ms Davies has a Healthway scholarship and is the 2013 winner of the UWA Matilda Award for Cultural Excellence. She has a background in psychology, evaluation, health promotion and is also a passionate visual artist.

Her supervisors are Associate Professor Michael Rosenberg and Winthrop Professor Matthew Kniman, senior academics in health promotion and public health.

MEDIA REFERENCE

Christina Davies (UWA School of Population Health) (+61 8) 6488 1285 / (+61 4) 04 159 241
Michael Sinclair-Jones (UWA Public Affairs) (+61 8) 6488 3229 / (+61 4) 00 700 783

For more information about UWA: www.uwa.edu.au
The Art of Good Health. Available at:

MEDIA STATEMENT
Tuesday 29 April 2014

THE ART OF GOOD HEALTH

Engaging in the arts for enjoyment, entertainment or as a hobby can be good for your mental, social and physical wellbeing, according to researchers at The University of Western Australia.

The award-winning study, published in BMJ Open, is the first internationally to look at the link between general population health and arts engagement.

Researchers found that engaging in the arts as part of everyday life, such as listening to music, reading, painting, dancing, playing a musical instrument, creative writing and attending arts events could make a difference to the health of individuals and the community.

Lead author and PhD candidate Christina Davies said good mental health was the foundation for individual and community wellbeing. “In this study, arts engagement was found to make people feel happy, reduced their stress and resulted in the creation of good memories,” Ms Davies said.

“Study participants also felt the arts gave their life more meaning, helped them meet new people, reduced social isolation and broadened their ideas and beliefs. The arts also had an impact on general knowledge, identity and resulted in physical activity such as walking and performance-based movement.

“Given the significant pressure on our health system, the arts may hold the key to a new type of health promotion and healing.”

Ms Davies said the study, which won an Arts and Health Australia Award for Excellence in November last year, provided 63 new insights into the relationship between the arts and population health and was a step towards the development of a causal arts and health model.

The ground-breaking research is part of the “Healthy Arts?” study to look at the relationship between arts engagement and health in the general population and was funded by Healthway.

For more information visit UWA’s School of Population Health, Health and Arts Research.

MEDIA REFERENCE

Christina Davies (UWA School of Population Health) (+61 4) 04 159 241
David Stacey (UWA Public Affairs) (+61 8) 6488 3229 / (+61 4) 32 637 716

For more information about UWA: www.uwa.edu.au
A2.1 NEWSPAPER ARTICLES

**Arts can put a skip in your step.** Pilbara News, 21 May 2014 (Local Media - Circulation: unknown)

Researchers at the University of Western Australia have found in a study that engaging in the arts for enjoyment, entertainment or as a hobby can help to improve the mental and physical health of individuals and the community.

Arts and culture events play a huge part in regional areas and are always well received by the community so this study provides some good news for the Pilbara.

In a world first study looking at the link between general population health and arts engagement, lead author and PhD candidate Christian Davies said good mental health was the foundation for individual and community wellbeing.

"In this study, arts engagement was found to make people feel happy, extend their stress and result in the creation of good memories," she said.

The research is about making the community aware of the arts and providing proper research on what it is, what the outcomes are and how much of it you need to participate in," says Davies.

"In order for some participants, arts engagement even made them feel some resilience against mental illness."

"Study participants also felt that arts gave their life more meaning, helped them meet new people, reduced social isolation and broadened their ideas and beliefs," she said.

Davies said the study provided new insights into the relationship between the arts and population health and was a step towards the development of a cultural arts and health model.

"When it comes to sport, you have got a lot of messages out there like Find 50, Live Active and all of that is based on 80 years’ worth of research, but when it comes to arts and health, there isn’t the research out there," she said.

"In truth, we know that it’s good for us but there’s no good for health promotion or getting funding from the government because when there’s a budget cut, the arts are always the first to go."

In the 2014-15 Federal Budget Bill no cut was made from Arts initiatives around the country.

Davies said attitudes towards the arts have to change and, given the significant pressure on our health system, the arts may hold the key to a new type of health promotion and healing.

"If you think about it in terms of if you were having a stressful day at work and you said to your boss, ‘I’m really stressed and need to go for a run for 30 minutes’, that would probably be OK, but if you said, ‘I’m really stressed and I’m just going to sit here and listen to music’, it would be classed as self-indulgent," she said.

Arts engagement makes you feel happy, it’s something social that you do with your family and friends and then you get dancing or walking and that’s your physical activity.

"All these things make people feel happy and are protecting them from a range of things, so that’s got to be a good thing."

"It’s much better to keep people well than to treat them when they’re sick."

Ms Davies’ groundbreaking research won an Arts and Health Australia Award for Excellence in November last year and is part of the Healthy Arts study which looks at the relationship between arts engagement and health.

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**COMING SOON**

**AT MOONRISE CINEMA**

Friday 23 May at 7pm

**THE AMAZING SPIDERMAN 2**

Peter Parker runs the gauntlet as the mysterious company Oscorp sends up a wave of super-villains against him, impacting on his life.

**ON SALE NOW**

**GRAND BUDAPEST HOTEL (M. Coen)**

Sunday 25 May at 7pm
Arts good for health — Study. Western Independent, 1 June 2014 (Local Media – Circulation: unknown)

Arts good for health — study

Tyreese Thawaloo

A study that found engaging in the arts for enjoyment can improve your health has been used by arts organisations to attain more funding.

The University of Western Australia study found attending arts events and participating in arts activities could be beneficial for social, mental and physical health.

Researcher Christina Davis said the research enabled arts programs to approach funding bodies with evidence that a positive health outcome could be reached.

"Usually, when you apply for funding, they need to tell the funder what outcomes they will be getting," she said.

"How do they have a great big list of outcomes they can look through?" Ms Davis said she had used the research to support two program evaluations – Monica Viva and Pukara Margaret Hospital Artist in Residence – which led to funding for both programs.

The evaluation for Monica Viva – a program that improves aged and disabled children in live music performance – recommended that funding partners continue with the program because it encouraged children to be creative and imaginative through music.

"We have been able to show in terms of participant surveys that both of these programs have had real impact in terms of mental and social health," Ms Davies said.

Monica Viva state manager Lindsay Lodering said government and corporate bodies supported measurements based on Ms Davies’ research.

"They appreciated it and they do look at it very closely," she said.

"It is very valuable for us, and I know a lot of the other arts organisations have picked that up and are using it in what we have been doing." The PMH Artist in Residence program, which was able to improve the health of children in hospital, has received further funding because of Ms Davies’ research.

Artist in Residence program executive director Chris Jones said without Ms Davis’ research the program might not have been funded.

"What is clear to me is that we were able to get those good outcomes because the PMH Foundation has researched it," Mr Jones said.

"If you can’t show the government or organisations that it is making a difference then they will not maintain their involvement."

Ms Davies said arts funding important community engagement.

"If you want a community to be happy and for people to have a really good quality of life, the arts are really important.”

WA Mental Health Minister Helen Moore said the WA Mental Health Commission supported arts initiatives in Western Australia.

Happy beat. My Weekly Preview, 16 May 2014 (Local Media - Circulation: 62,500 weekly)
Positive moves

Claire Tyrrell

When Ellie Mackay is dancing, she is too focused on her technique to worry about the challenges she faces in life.

"Adult dance classes are a safe place where you can escape from thoughts or experiences that go around uneasily in your mind and just focus on the beauty that is dance," she said.

Ms Mackay is among the dozens of participants in Perth’s Dance Workshop, which offers classes across several disciplines. She grew up doing ballet but quit when her father died 14 years ago. She took up ballet again six months ago.

"As you make friends and hear their stories, it makes it a positive experience because you realise that you’ve all been through tough times but you’re here learning, developing and laughing together," Ms Mackay said.

A recent UWA study found doing arts as a hobby can have a positive impact on health and wellbeing. Lead author Christina Davies surveyed 38 adults across the State. "Arts engagement was found to make people happy, reduce their stress and create good memories," she said.
HEALTH

Happy beat
Playing music or engaging in other artistic pastimes gives people a mental and physical boost, according to an Australian study.

People who enjoy participating in or watching artistic activities as part of everyday life tend to feel happy and less stressed, says researcher Christine Davies, a PhD candidate at the University of Western Australia. “The arts also had an impact on general knowledge, identity and resilience in physical activity such as walking and performance-based movement,” she said in the Journal BMJ Open.
Participation in the arts a de-stressor. North West Star, 9 May 2014 (Local Media - Circulation: 2375 daily)

Arts a health boost. Kalgoorlie Miner, 5 May 2014 (Local Media - Circulation: 4677 daily)
**Artistic activities give you happy vibe.** Western Advocate, 3 May 2014 (Local Media - Circulation: 3212 daily)

**Arts contribution to health.** National Business Review, 18 October 2013 (International Media: 90,000 weekly)

**If music be the food of love, play on.** The Australian, Higher Education, 3 October 2013 (National Media: 436,000 daily)
Getting arty is good for you

Push for holistic approach to health around WA

In Paraburdoo, miners are blowing up old trucks to make a public sculpture while breaking down the stigma around mental health.

On the edge of the Great Victoria Desert, Aboriginal people have combined ancient sand-art techniques with digital animation in a project to fight diabetes and renal disease.

At St John of God Hospital in Munrooch, patients can watch a pioneering in-house TV arts channel that applies the “feel good” factor of the arts in aiding good health.

Laughter may be the best medicine, as the saying goes, but it seems getting stuck into art is just as good.

Music, writing, painting, dancing and performing are acting their part in the push for a holistic approach to health around the State.

The arts are good for you equation was confirmed by a recent University of WA study pointing to creative pursuits as the key to a new type of healing that would help ease pressure on our health systems.

WA hospitals, which hold some of the State’s most impressive art collections, are embracing the power of art in the wards, corridors and even the operating theatres, where music often accompanies challenging surgical procedures.

Royal Perth Hospital has the biggest hospital art collection in Australia, with about 1000 works by Arthur Boyd, Albert Namatjira, Rover Thomas, Robert Juniper, Arthur Streeton and other prominent artists. Sir Charles Gairdner Hospital has more than 200 works gracing its corridors.

St John of God Munrooch Hospital’s arts channel kicked off last month with the documentary series Makers, which profiles WA artists represented in its own large collection.

St John of God art curator Connie Perillo says the channel builds on studies showing how art can de-stress patients by changing brain wave patterns, affecting the nervous system, hormonal balance and brain neurotransmitters.

“The designated arts channel has the added value of additional exposure to art for patients who may be immobile or required to rest,” Ms Perillo says.

“Art gives patients a sense of wellbeing and comfort in their recovery. The simple act of having something to divert your attention from the health problem at hand and that can engage you in something beautiful or thought-provoking, can calm the mind. Patients often comment about the difference that this makes in helping alleviate some of their anxiety as they are taken into surgery.”

Victron to Flora Stanley Hospital next door, which will open its doors on October 4, will be greeted in the main foyer by a striking sculpture by local artist Stuart Green that resembles a bench seat designed by Dali and crossed with a giant Scalemic truck.

One of 11 public art commissions at Flora Stanley totalling $5.5 million under the Percent for Art Scheme, Green’s timbers and sawdust in between and all around acts as a sense of fun while acting as a navigational aid in the massive facility.

“People are going to be walking around and at least when they see my place, they will go, ‘Ah, I’ve been here before’,” Green says.

“The bench seat stretches out and loops the loop, encouraging the eye to follow its curves through the air in what Green hopes will give viewers a brief distraction from any anxiety about their hospital stay.

“If you can have that kind of humanising, quirky, interesting office on the patients, you believe that stress and boredom, they heal quicker and you may be able to get them out of the door quickly,” he says. “If you get 5 per cent of the patients out of the door quicker, that is a huge cost benefit for the life of the hospital.”

Art works at Flora Stanley have been integrated into the design and construction, using colour and positioning to help people find their way at a stressful and uncomfortable time when they are more likely to become disoriented.

“The main Eyre window is the hospital’s central courtyard and play area, where Ola Cironis has installed several playful animal figures that appear to be made of stitched blankets and awaiting a cuddle from children.”

Cironis has cast them in bronze, usually used to immobilise a man, to challenge ideas of what is important in life and so that each cuddle will push them into a golden future.

Cironis also has worked with children at Princess Margaret Hospital, where her Laughter Amongst Chloists’ installation has been made with input from staff and patients in the eating disorders ward.

The WA Symphony Orchestra is applying music as medicine in its regular visits to PMH, where its concerns in the Starlight Children’s Theatre are broadcast on the

Abstinence for art’s sake

Saskia Pickles
saskia.pickles@businessnews.com.au

STATE government agency Healthway made headlines this year for its large sponsorship deals with the Western Australian Cricket Association and Perth Glory, but a new study has found its sponsorship of arts events is the quiet achiever.

A local study has found people are twice as likely to act on anti-smoking messages such as ‘Smarter than Smoking’ and ‘Smoke Free’ after seeing them at arts events compared with the same messages at sporting events.

University of Western Australia PhD candidate Christina Davies carried out the study on 1,000 Western Australians using data compiled by Healthway from sponsored events such as YOH Fest, Mellen Events concerts, and the Boyup Brook music festival.

Healthway spends just less than $1 million a year sponsoring sports and arts events in exchange for the right to put up health promotion messages and ensure all events are smoke-free.

It has a legislative obligation to spend no less than 30 per cent of its funds on sport events and no less than 15 per cent on arts events, and receives three times more requests for support than it has funding allocations for.

This year it signed a three-year, $2.1 million deal with the WACA to remove alcohol promotion at domestic matches, and a $500,000 deal over two years with Perth Glory to remove junk food advertising during matches.

Executive director David Malone said Healthway had been supporting arts and sports events since 1991, so the study’s findings had not surprised him, but were reaffirming.

“Over the last 20 years we’ve accumulated a large amount of data and evaluation that demonstrates very clearly that sponsoring sport and arts to promote health messages can be very effective at improving the health of the community,” Mr Malone told Business News.

“We’ve been doing it a lot longer than most and the focus on arts sponsorship is quite unusual, it’s not something too many organisations do. Healthway... really is a world leader in that area.”

Mrs Davies said she believed the reason messages at art events could better influence people than those at sporting events was that they were unexpected, triggering more of a “cognitive impact”.

‘At sports events the idea of promoting health is something that you expect, whereas I think at an arts event you’re more likely to view something or to experience something and I think a health message at an arts event is probably a little less common, so it’s much more novel,” Mrs Davies said.

Mr Malone said the new study might have an effect on how Healthway matched its different health promotion messages at various events.

“Every time a new study comes along, we’re very interested in it, but it gets thrown into the mix and is considered as part of a body of evidence. I think the most overwhelming thing the evidence says to us is that there is good outcomes from promoting messages in non smoking in both arts and sport,” he said.
A3.1 ONLINE / E-ARTICLES


The art of good health. Medical Xpress, US. 29 April 2014

The art of good health

Engaging in the arts for enjoyment, entertainment or as a hobby can be good for your mental, social and physical wellbeing, according to researchers at The University of Western Australia.

The award-winning study, published in *BMJ Open*, is the first internationally to look at the link between general population health and arts engagement.

Researchers found that engaging in the arts as part of everyday life, such as listening to music, reading, painting, dancing, playing a musical instrument, creative writing and attending arts events could make a difference to the health of individuals and the community.

Lead author and PhD candidate Christina Davies said good mental health was the foundation for individual and community wellbeing. "In this study, arts engagement was found to make people feel happy, reduced their stress and resulted in the creation of good memories," Ms Davies said.

"Study participants also felt the arts gave their life more meaning, helped them meet new people, reduced social isolation and broadened their ideas and beliefs. The arts also had an impact on general knowledge, identity and resulted in physical activity such as walking and performance-based movement.

"Given the significant pressure on our health system, the arts may hold the key to a new type of health promotion and healing."

Ms Davies said the study, which won an Arts and Health Australia Award for Excellence in November last year, provided 63 new insights into the relationship between the arts and population health and was a step towards the development of a causal arts and health model.
Arts promote healthy living. Hospital and aged care, Australia. 28 Oct 2013

The arts are a great way to promote healthy living, according to researchers from the University of Western Australia.

PhD candidate, at the UWA’s School of Population Health, Christina Davies said while smoking was a leading cause of preventable death and disability, research involving more than 1000 adults, found people attending arts events were more likely to form an intention to act on promoted anti-smoking messages than those at sports events.

“We found that the arts have merit beyond intrinsic artistic value and are a viable setting for promoting nutrition, physical activity, sun protection, safe alcohol consumption and anti-smoking to the community,” she said.

According to Ms Davies this is good news for arts organisations.

“Sponsorship or partnerships with health organisations not only fits with the arts and health ethos of community well-being but could also be a source of much-needed funding for the arts.

“People who engage in community events exhibit a mix of healthy and unhealthy behaviours. In countries like Australia where involvement in the arts is high, these settings should be used to promote health to the community.

“We found that venue signage and announcements were the most effective methods of promotion,” she said.
A4.1 MAGAZINE ARTICLES

**Colour me happy.** Box International Magazine, July 2014. (Circulation: 250,000 quarterly)

![Image of Colour me happy article](image)

The Art of Being Healthy. Uniview 2014. (Circulation 65,000 half-yearly, all UWA graduates globally, all secondary schools and libraries in Western Australia)

![Image of The Art of Being Healthy article](image)

**The Art of Being Healthy**

When was the last time you went to a movie or a concert? How about a football game? In your free time, do you listen to music, read novels, take photographs, dance, paint or play a musical instrument?

If you engage in any of these activities, you'll be glad to know it can be a source of health. According to Christine Chiu, the 2013 winner of the Singapore Ministry of Health’s Cultural Excellence Award, engaging in the arts is not just entertainment, but can be a great way to improve your mental, social and physical well-being.

Chiu’s PhD paper, "The Art of Being Healthy," published in 2016, provides evidence that participation in the arts has the ability to improve physical health. The paper, which was cited in the top 2% of articles by researchers, showed that arts-related activities can improve physical health, mood and overall well-being.

Chiu noted, "We need to make people aware of the benefits of the arts. It’s not just about entertainment; it’s about improving our health and well-being."

Chiu added, "The arts can help us to be more creative, to express ourselves, and to connect with others. They can also help us to think more critically and to be more empathetic."

For more information on the arts and health, visit [this website](link). For further information on the Singapore Ministry of Health’s Cultural Excellence Awards, visit [this page](link).

![Image of Christine Chiu](image)
A5.1 TWITTER

- BMJ open related tweets (97,358 followers)
- The art of good health #uwa Ez.com/xu3m (4983 followers)
- Arts beat sport for healthier living #uwa Ez.com/a8pd (4076 followers)
- Is #art at the heart of #health? #uwa Ez.com/2chu (4000 followers)
A6.1 FEATURES
Public Health Advocacy Institute of Western Australia Member News

Front page, The University of Western Australia Website (30 April – 4 May 2014)
Appendix B: Surveys and recruitment material
B1.1 INTERNATIONAL SURVEY OF EXPERTS - SURVEY 1

This survey was conducted using ‘Checkbox’ to create a definition of arts engagement for population based research. Checkbox is an online survey tool for creating and distributing surveys and collecting data.

Invitation email – International Survey of Experts, Survey 1

Dear [FirstName]

RE: Arts Engagement and Health Study - Determining the Outcomes

The University of Western Australia in collaboration with Curtin University of Technology (School of Design and Art) are undertaking research regarding arts engagement and health. As part of the study, we are asking professionals with links to the arts industry about their views regarding ‘arts engagement’ and arts-related activities/outcomes. Your name was [randomly provided to us by name/institution name or identified from website name].

You are invited to assist us in this research by completing two brief online surveys. The first online survey will ask you questions about the concept of arts engagement. The results of the first survey will be collated and used to generate a second survey. The second survey will be sent to you at a later date. In the second survey you will be asked to rate a list of activities on the ‘level’ of artistic engagement they provide to participants. At the end of the second survey period you will be provided with a summary of the research findings as a thank you for your participation.

Each survey should take approximately 10 minutes to complete. If you agree to take part in the survey you do not have to answer any questions that you do not wish to and you can decide to opt out of the survey at any time. This study follows strict confidentiality guidelines in terms of the information we collect. All information collected will be used for research purposes only and will not identify any individuals.

If you have any questions about this project please contact the Chief Investigator, Christina Mills at the University of Western Australia via the telephone +61 8 6 488 5608 or email christina.mills@uwa.edu.au. As this study is part of her PhD, you can also contact Christina’s PhD supervisor Associate Professor Michael Rosenberg on +61 8 6 488 4654 or email michael.rosenberg@uwa.edu.au.

Please complete survey 1 by the 11th December 2009.

Please click on the link below to go to Survey 1: [insert survey link]

Your participation in this study is greatly appreciated and will contribute to the evidence base around the topic of the arts engagement and health outcomes.

Yours sincerely,

Christina Mills
Chief Investigator
Dear [First Name],

RE: REMINDER - Arts Engagement and Health Study

If you have already responded to this email, thank you for your participation. If you have not yet had a chance to respond we would really appreciate your assistance. Survey 1 will close on the 11th December 2009.

Your participation in this study will contribute to the evidence base around the topic of arts engagement and health. In the first survey we ask you to respond to questions about the concept of arts engagement. The survey should take no more than 15 minutes to complete. If you agree to take part in the survey you do not have to answer any questions that you do not wish to and you can decide to opt out of the survey at any time. The results of the first survey will be collated and used to generate a second survey. In the second survey you will be asked to rate a list of activities on the 'level' of artistic engagement they provide to participants. At the end of the second survey period respondents will be provided with a summary of the research findings as a thank you for participating in the study.

Please click on the link below to go to Survey 1:
[insert survey link]

Alternatively, if you would like to receive the survey as a word document that you can complete and return electronically please email, Christina Mills at the University of Western Australia on christina.mills@uwa.edu.au

Yours sincerely,

Christina Mills
Chief Investigator

[This study is funded by Healthway. This study has been approved by the University of Western Australia Human Research Ethics Committee. Ref: RA/4/1/1609]
Introduction

The University of Western Australia in collaboration with Curtin University of Technology (School of Design and Art) are undertaking research to investigate the relationship between arts engagement and health.

This survey is the first of two online surveys. In this survey we ask you to think about the concept of arts engagement. The survey should take approximately 15 minutes to complete. If you agree to take part in the survey you do not have to answer any questions that you do not wish to and you can decide to opt out of the survey at any time.

If you have any questions about this project please contact the Chief Investigator, Christine Mifsud at the University of Western Australia via telephone +61 8 6 488 5608 or email christina.mifs@uwa.edu.au. As this study is part of her PhD, you can also contact Christina’s PhD supervisor Associate Professor Michael Rosenberg on +61 8 6 488 4654 or email michael.rosenberg@uwa.edu.au.

Please complete survey 1 by the 11th December 2020. Your participation in this study is greatly appreciated and it contributes to the evidence base around the topic of arts engagement and health.

[This study is funded by the Healthway. This message has been approved by the University of Western Australia - Human Research Ethics Committee. Ref: RA441/2496]

Consent

(Q1) Consent Acknowledgement
Please indicate whether or not you consent to take part in this study.
(To comply with ethics requirements, an answer is required to this question before you can proceed with the survey)

○ I GIVE my consent to participate in the Arts Engagement and Health Study
○ I DO NOT GIVE my consent to participate in the Arts Engagement and Health Study
Survey Preview

Below is a preview of your survey which was generated using the current theme and style template. When you are finished previewing, please close this browser window to return to the administration console.

Click here to close the preview.

Languages: English

Arts Engagement

(Q2) When you think about the concept of 'Arts Engagement' what words come to mind? The words may relate to your definition of arts engagement, your thoughts/feelings about arts engagement, arts engagement characteristics/dimensions or even methods of engagement.

[Blank response area]

<< Back Next >>
Survey Preview

Below is a preview of your survey which was generated using the current design and style template. When you are finished previewing, please close this browser window to return to the administration console.

Click here to close the preview.

Language: English

(Q3) In what ways (if any) do you think arts engagement can positively influence the physical, mental or social well being of a person?

(Q4) In what ways (if any) do you think arts engagement can negatively influence the physical, mental or social well being of a person?

<< Back  Next >>
Survey Preview

Below is a preview of your survey which was generated using the current form and style template. When you are finished previewing, please close this browser window to return to the administration console.

Click here to close the preview.

Page 4 of 7

Language: English

(Q5) What are the characteristics of an arts engagement activity/event that make it different to other types of non-arts activities/events (e.g. playing sport)?


(Q6) In the space provided below, please list factors that you consider to be barriers to people engaging in arts related activities and events.


<< Back Next >>
Arts Engagement Activities and Events

People typically engage in a broad variety of both arts and non-arts activities as part of their weekly routine, as an occasional event or as a one-off experience. Engagement can be passive or active. Examples of such activities include:

- playing a musical instrument as part of a live music performance;
- participating in a team sport at a local community centre;
- visiting a gallery to view works of art;
- watching a ‘main stream’ film at a local cinema;
- gardening at home, and/or
- participating in dance lessons at a local dance studio.

One of our research objectives is to create a list of typical Arts Engagement Activities. To do this, we require your help to identify activities/events that should be included on this list.

(O7a) In the space provided below please list the types of activities/events related to your field of expertise that you consider to be examples of arts engagement activities. For each example, please indicate the ‘type’ of arts activity and the ‘method of participation’ as shown in the examples above.

1. 
2. 
3. 
4. 
5. 
6. 
7. 
8. 


(Q7b) In the space provided below please list the types of activities/events outside your field of expertise that you consider to be examples of arts engagement activities. For each example, please indicate the ‘type’ of arts activity and the ‘method of participation’ as shown in the examples above.
Survey Preview

Below is a preview of your survey which was generated using the current item set and style template. When you are finished previewing, please close this browser window to return to the administration console.

Click here to close the preview.

Page 6 of 7

Language: English

Demographics

What is your gender?
- Male
- Female

Age group
- 18 or less
- 20 to 29 years
- 30 to 39 years
- 40 to 49 years
- 50 to 59 years
- 60+

What is your job title?

Occupation classification (please tick all that apply)
- Arts Academic
- Arts and Health Academic
- Arts Administrator
- Event Coordinator/Manager
- Professional Artist (currently practicing)

Done
Occupation classification
(please tick all that apply)
☐ Arts Academic
☐ Arts and Health Academic
☐ Arts Administrator
☐ Arts Coordinator/Manager
☐ Professional Artist (currently practicing)
☐ Health Professional
☐ Student
☐ Other occupation
☐ (please specify)

How long have you been employed in an Arts related industry?
(number of years)
☐ ☐ ☐ ☐

In which arts related fields are you currently employed (i.e. paid work)?
(please tick all that apply)
☐ Visual Arts
☐ Music
☐ Theatre
☐ Film
☐ Dance
☐ Literature
☐ Craft
☐ Multi-disciplinary arts / festivals
☐ Funding / sponsorship of the arts
☐ Administration
☐ Academia
☐ Other
☐ (please specify)

In your own leisure time, in which arts related facilities do you usually engage (i.e. hobbies, amateur arts participation, attendance of arts events, etc.)?
In your own leisure time, in which arts related field(s) do you usually engage (e.g. hobbies, amateur arts participation, attendance of arts events, etc)? (please tick all that apply)

☐ Visual Arts
☐ Music
☐ Theatre
☐ Film
☐ Dance
☐ Literature
☐ Craft
☐ Multi-disciplinary events / festivals
☐ Funding / sponsorship of the arts
☐ Administration
☐ Academia

Other (please specify)

If you would like to make other comments about the concept of arts engagement, arts outcomes or this survey please do so in the space provided below

Finish
Thank you for your participation.

You will receive a second email in the next few weeks providing you with a link to the second survey.

If you have a question or comment about this research please contact Christina Mills at The University of Western Australia via telephone +61 8 6 488 5608 or email christina.mills@uwa.edu.au
B1.2 INTERNATIONAL SURVEY OF EXPERTS - SURVEY 2

This survey was conducted using ‘Qualtrics’. Qualtrics is an online survey tools for creating and distributing surveys and collecting data.

Invitation email – International Survey of Experts, Survey 2

Expert Survey 2

Email

Dear [First Name],

RE: Arts Engagement and Health - Determining the Outcomes

Thank you for completing the first survey of the Arts Engagement and Health study. Internationally, we had 121 responses from professionals with links to the arts industry (a response fraction of 42%). The information collected is very interesting and we look forward to sharing our findings with you once the data has been analysed. In the mean time, we would really appreciate it if you could complete our second survey. In this survey you will be asked to rate a list of activities in terms of the amount of arts experienced by a person when they take part in various activities. The list of activities was generated from the pool of responses to Survey 1 of which 650 arts activities were suggested. Survey 2 should take approximately 20 minutes to complete.

If you agree to take part in the survey you do not have to answer any questions that you do not wish to and you can decide to opt out of the survey at any time. We will only use the information collected for research purposes and will not identify individuals.

If you have any questions about this project please contact the Chief Investigator, Christina Mills at the University of Western Australia via telephone +61 8 6 04 5505 or email christina.mills@uwa.edu.au. As this study is part of her PhD, you can also contact Christina’s PhD supervisor Associate Professor Michael Rosenberg on +61 8 6 04 5506 or email michael.rosenberg@uwa.edu.au.

Please click on the link below to go to Survey 2: {insert survey link}

Please complete Survey 2 by the 31st May 2010. Your participation in this study is very much appreciated and will contribute to the evidence base around the topic of the arts and health.

Yours sincerely,

Christina Mills
Chief Investigator
Reminder email – International Survey of Experts, Survey 2

Survey 2

Dear [First Name],

RE: Reminder - Arts Engagement and Health Study

If you have already responded to this email, thank you for your participation. If you have not yet had a chance to respond we would really appreciate your assistance. Survey 2 will close on the 4th June 2019.

Your participation in this study will contribute to the evidence base around the topic of arts engagement and health. In the survey you will be asked to rate a list of activities in terms of the 'amount of arts experienced by a person when they take part in various activities. The list of activities was generated from the pool of responses to Survey 1 of which 650 arts activities were suggested. Survey 2 should take approximately 20 minutes to complete. If you agree to take part in the survey you do not have to answer any questions that you do not wish to and you can decide to opt out of the survey at any time. We will only use the information collected for research purposes and will not identify individuals.

Please click on the link below to go to Survey 2:
{Insert survey link}

Alternatively, if you would like to receive the survey as a word document that you can complete and return electronically, please email Christina Mills at the University of Western Australia on christina.mills@uwa.edu.au.

Yours sincerely,

Christina Mills
Chief Investigator

[This study is funded by Healthway. This message has been approved by the University of Western Australia - Human Research Ethics Committee, Ref: RA/6/1/1660]
International Survey of Experts, Survey 2

Introduction

Thank you for completing the first survey of the Arts Engagement and Health study. We would now like to ask you to complete a second survey about the ‘amount’ of arts experienced by a person when they take part or engage in various activities. To do this we will present you with a list of activities and ask you to rate each activity on a 10 point scale. As shown in the example below, the scale ranges from zero to nine where “1” represents a low level of arts engagement experienced when a person takes part in the stated activity, up to “9” which represent a high level of arts engagement experienced. Alternatively, you may think that the stated activity is not an arts activity at all, in which case you would rate the activity as zero i.e. “0” - not an arts activity.

<table>
<thead>
<tr>
<th>Not an Arts Activity</th>
<th>Level of Arts Engagement experienced</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1 2 3 4 5 6 7 8 9</td>
</tr>
</tbody>
</table>

As previously stated in the invitation email, this survey should take approximately 20 minutes to complete. If you agree to take part in the survey you do not have to answer any questions that you do not wish to and you can decide to opt out of the survey at any time.

If you have any questions about this project please contact the Chief Investigator, Christina Mills at the University of Western Australia via telephone +61 8 6 488 5608 or email christina.mills@uwa.edu.au. As this study is part of her PhD, you can also contact Christina’s PhD supervisor Associate Professor Michael Rosenberg on +61 8 6 488 4654 or email michael.rosenberg@uwa.edu.au.

Please complete this by the 31st May 2010.

[This study is by funded Healthway. This message has been approved by the University of Western Australia - Human Research Ethics Committee, Ref: RA/4/1/2490]

Please read the list of activities below and for each activity rate the ‘amount’ of arts experienced by a person when they engage in that activity.

Sound and Performing Arts

Below is a list of sound and performing arts activities. For the purposes of this survey, sound and performing arts refers to all types of activities in the genre of dance, film, theatre, music, singing, circus and television.

The rating scale ranges from zero to nine, where “1” represents a low level of arts engagement experienced when a person takes part in the stated activity, up to “9” which represent a high level of arts engagement experienced when they take part in the stated activity. Alternatively, you may not think that the stated activity is an arts activity at all, in which case you would rate the activity as “0” or not an arts activity.
<table>
<thead>
<tr>
<th>Activity</th>
<th>Not an Arts Engagement Activity</th>
<th>Amount of arts experienced by a person when they engage in the activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listening to a recording of the performing arts (e.g. music, singing) via a CD player, radio, web stream, i-pod etc</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buying a performing arts related CD, DVD or MP3 in a store or online</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attending a professional performing arts performance or concert as part of an audience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attending an amateur performing arts concert as part of an audience e.g. at a school, community centre etc</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participating, as a professional artist, in a performing arts class, workshop or training program to learn or improve skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participating, as an amateur artist or member of the public, in a performing arts class, workshop or training program to learn or improve skills (e.g. dancing lessons, learning an instrument, singing etc)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participating in a performing arts rehearsal to practice for a performance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participating in a live performing arts performance as a professional artist (i.e. actor, dancer, musician or singer)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participating in a live performing arts performance as an amateur artist (i.e. amateur actor, dancer, musician or singer)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participating in a performing arts event as a stage hand, technician, assistant etc</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DJ-ing at performing arts event</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Busking in a shopping mall, park, city street, festival etc</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watching buskers/street performers perform in a shopping mall, park, city street, festival etc</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watching a main stream film at a cinema</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watching an art house film at a cinema</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watching a main stream show, film or documentary on the television</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watching an arts related show, film or documentary on the television</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watching a recording of the performing arts (e.g. dance performance) via a web stream, podcast, DVD etc</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Making a home movie with friends/family</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Activity** | **Not an Arts Engagement Activity** | **Amount of arts experienced by a person when they engage in the activity**
---|---|---
Making or designing the costumes, sets, lighting or backdrops for a performing arts event | 0 | O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉
Teaching or facilitating a performing arts class, workshop, training program | 0 | O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉
Jamming, composing, recording, mixing music/songs as a professional artist | 0 | O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉
Jamming, composing, recording, mixing music/songs as an amateur artist | 0 | O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉
Writing a script for a film or play/theatre production | 0 | O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉
Directing, producing, choreographing or editing a performing arts film, production or performance | 0 | O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉
Compiling a MP3 music play list | 0 | O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉
Participating in the various performing arts activities or events for self enjoyment, relaxation or self-reflection (e.g. dancing, learning an instrument, jamming, singing) | 0 | O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉

**Visual Arts, Decorative Design and Craft**

Below is a list of visual arts, decorative design and craft activities. For the purposes of this survey, the *visual arts, decorative design and craft* refers to all types of activities in the genre of animation, craft (scrapbooking, sewing, knitting etc), drawing, fashion, interior design/decorating, jewellery, manual arts (woodwork, metalwork etc), painting, photography, pottery/ceramics, public art, sculpture, textiles, etc.

*The rating scale ranges from zero to nine, where “1” represents a low level of arts engagement experienced when a person takes part in the stated activity, up to “9” which represent a high level of arts engagement experienced when they take part in the stated activity. Alternatively, you may not think that the stated activity is an arts activity at all, in which case you would rate the activity as “0” or not an arts activity.*

**Activity** | **Not an Arts Engagement Activity** | **Amount of arts experienced by a person when they engage in the activity**
---|---|---
Collecting/buying original works of art e.g. paintings, sculpture etc | 0 | O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉
Attending a professional visual arts/decorative design/craft exhibition as part of an audience or spectator e.g. art gallery etc | 0 | O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉
Attending an amateur visual arts/decorative design/craft exhibition as part of an audience or spectator e.g. at a school, community centre etc | 0 | O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉
Viewing public/urban art in a public space | 0 | O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉
<table>
<thead>
<tr>
<th>Activity</th>
<th>Not an Arts Engagement Activity</th>
<th>Amount of arts experienced by a person when they engage in the activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creating/designing public/urban art for a public space (includes sculptures, paintings, murals etc)</td>
<td>O</td>
<td>O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉</td>
</tr>
<tr>
<td>Creating/designing a visual arts/decorative design/craft artwork, as a professional artist, for an exhibition or as a commission etc</td>
<td>O</td>
<td>O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉</td>
</tr>
<tr>
<td>Creating/designing a visual arts/decorative design/craft artwork, as a professional artist, for self enjoyment, relaxation, self-reflection etc</td>
<td>O</td>
<td>O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉</td>
</tr>
<tr>
<td>Creating/designing a visual arts/decorative design/craft artwork, as an amateur artist or member of the public, for an exhibition, as a commission etc</td>
<td>O</td>
<td>O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉</td>
</tr>
<tr>
<td>Creating/designing a visual arts/decorative design/craft artwork, as an amateur artist or member of the public, for self enjoyment, relaxation, self-reflection etc</td>
<td>O</td>
<td>O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉</td>
</tr>
<tr>
<td>Participating, as a professional artist, in a visual arts/decorative design/craft class, workshop or training program to learn or improve skills</td>
<td>O</td>
<td>O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉</td>
</tr>
<tr>
<td>Participating, as an amateur artist or member of the public, in a visual arts/decorative design/craft class, workshop or training program to learn or improve skills (e.g. painting lessons, knitting groups, craft groups etc)</td>
<td>O</td>
<td>O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉</td>
</tr>
<tr>
<td>Teaching or facilitating a visual arts/decorative design/craft class, workshop, training program</td>
<td>O</td>
<td>O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉</td>
</tr>
<tr>
<td>Participating in the various visual arts/decorative design/craft activities or events for self enjoyment, relaxation or self reflection</td>
<td>O</td>
<td>O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉</td>
</tr>
</tbody>
</table>

**Literature**

The rating scale ranges from zero to nine, where “1” represents a low level of arts engagement experienced when a person takes part in the stated activity, up to “9” which represent a high level of arts engagement experienced when they take part in the stated activity. Alternatively, you may not think that the stated activity is an arts activity at all, in which case you would rate the activity as “0” or not an arts activity.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Not an Arts Engagement Activity</th>
<th>Amount of arts experienced by a person when they engage in the activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buying a paperback, hard cover or electronic book in a store or online</td>
<td>O</td>
<td>O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉</td>
</tr>
<tr>
<td>Attending a book reading, book launch or author's talk</td>
<td>O</td>
<td>O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉</td>
</tr>
</tbody>
</table>
### Online, Computer and Electronic Arts

The rating scale ranges from zero to nine, where “1” represents a low level of arts engagement experienced when a person takes part in the stated activity, up to “9” which represent a high level of arts engagement experienced when they take part in the stated activity. Alternatively, you may not think that the stated activity is an arts activity at all, in which case you would rate the activity as “0” or not an arts activity.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Not an Arts Engagement Activity</th>
<th>Amount of arts experienced by a person when they engage in the activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Writing a book, poetry, essay, short story etc as a professional author</td>
<td>O₈</td>
<td>O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉</td>
</tr>
<tr>
<td>Writing a book, poetry, essay, short story etc as an amateur author or</td>
<td>O₈</td>
<td>O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉</td>
</tr>
<tr>
<td>member of the public</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading a book, poetry, essay, short story etc for self enjoyment,</td>
<td>O₈</td>
<td>O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉</td>
</tr>
<tr>
<td>relaxation, self-reflection etc</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading about the arts, art history, art theory etc in an arts related</td>
<td>O₈</td>
<td>O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉</td>
</tr>
<tr>
<td>book, journal, essay, online etc</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Going to a library to borrow a book, CD, DVD etc</td>
<td>O₈</td>
<td>O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉</td>
</tr>
<tr>
<td>Discussing a book, poetry, essay, short story etc as part of a book club</td>
<td>O₈</td>
<td>O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉</td>
</tr>
<tr>
<td>or reading group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching or facilitating a literary arts class, workshop or training</td>
<td>O₈</td>
<td>O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉</td>
</tr>
<tr>
<td>program e.g. writing skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participating, as a professional author, in a literary arts class,</td>
<td>O₈</td>
<td>O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉</td>
</tr>
<tr>
<td>workshop or training program to learn or improve skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participating, as an amateur author or member of the public, in a literary</td>
<td>O₈</td>
<td>O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉</td>
</tr>
<tr>
<td>arts class, workshop or training program to learn or improve skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participating in the various literary arts activities or events for self</td>
<td>O₈</td>
<td>O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉</td>
</tr>
<tr>
<td>enjoyment, relaxation or self reflection</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Online, Computer and Electronic Arts

<table>
<thead>
<tr>
<th>Activity</th>
<th>Not an Arts Engagement Activity</th>
<th>Amount of arts experienced by a person when they engage in the activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online ‘chatting’ via social network sites (Facebook) or chat rooms</td>
<td>O₈</td>
<td>O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉</td>
</tr>
<tr>
<td>Downloading online movies, music, videos</td>
<td>O₈</td>
<td>O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉</td>
</tr>
<tr>
<td>Viewing/completing online arts tutorials to learn about the arts or to</td>
<td>O₈</td>
<td>O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉</td>
</tr>
<tr>
<td>obtain a skill</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Viewing arts websites to obtain arts related information</td>
<td>O₈</td>
<td>O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉</td>
</tr>
<tr>
<td>Viewing websites to obtain general information</td>
<td>O₈</td>
<td>O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉</td>
</tr>
<tr>
<td>Viewing or listening to a visual artwork, performance or literary work</td>
<td>O₈</td>
<td>O₁ O₂ O₃ O₄ O₅ O₆ O₇ O₈ O₉</td>
</tr>
<tr>
<td>via a website, web stream, podcast etc</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activity</td>
<td>Not an Arts Engagement Activity</td>
<td>Amount of arts experienced by a person when they engage in the activity</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>---------------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>Making an electronic or online artwork, animation, video, film, music recording etc</td>
<td>$O_0$</td>
<td>$O_1$ $O_2$ $O_3$ $O_4$ $O_5$ $O_6$ $O_7$ $O_8$ $O_9$</td>
</tr>
<tr>
<td>Writing a digital story or blog</td>
<td>$O_0$</td>
<td></td>
</tr>
<tr>
<td>Creating/designing a website</td>
<td>$O_0$</td>
<td></td>
</tr>
<tr>
<td>Participating in an online forum after attending/participating in an arts event</td>
<td>$O_0$</td>
<td></td>
</tr>
<tr>
<td>Participating in an online forum to obtain or share arts related information</td>
<td>$O_0$</td>
<td></td>
</tr>
<tr>
<td>Participating in the various online/computer/electronic arts activities or events for self enjoyment, relaxation or self reflection</td>
<td>$O_0$</td>
<td></td>
</tr>
</tbody>
</table>

**Community and Cultural Festivals, Fairs and Events**

The rating scale ranges from zero to nine, where “1” represents a low level of arts engagement experienced when a person takes part in the stated activity, up to “9” which represent a high level of arts engagement experienced when they take part in the stated activity. Alternatively, you may not think that the stated activity is an arts activity at all, in which case you would rate the activity as “0” or not an arts activity.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Not an Arts Engagement Activity</th>
<th>Amount of arts experienced by a person when they engage in the activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attending a community arts festival or fair</td>
<td>$O_0$</td>
<td>$O_1$ $O_2$ $O_3$ $O_4$ $O_5$ $O_6$ $O_7$ $O_8$ $O_9$</td>
</tr>
<tr>
<td>Attending a cultural performance or ceremony</td>
<td>$O_0$</td>
<td></td>
</tr>
<tr>
<td>Attending a religious event, activity or place of worship (church, mosque, etc)</td>
<td>$O_0$</td>
<td></td>
</tr>
<tr>
<td>Making artworks for a community event or procession e.g. lanterns</td>
<td>$O_0$</td>
<td></td>
</tr>
<tr>
<td>Participating in a community festival/fair as an amateur artist, performer, musician etc or member of the general public</td>
<td>$O_0$</td>
<td></td>
</tr>
<tr>
<td>Participating in a community festival/fair as a professional artist, performer, musician etc</td>
<td>$O_0$</td>
<td></td>
</tr>
<tr>
<td>Participating in a cultural performance, traditional welcome, parade or ceremony</td>
<td>$O_0$</td>
<td></td>
</tr>
<tr>
<td>Participating in a community arts workshop to create murals, mosaic etc</td>
<td>$O_0$</td>
<td></td>
</tr>
<tr>
<td>Teaching or facilitating a community arts class, workshop or training program</td>
<td>$O_0$</td>
<td></td>
</tr>
<tr>
<td>Participating in the various community/cultural festivals, fairs or events for self enjoyment, relaxation or self reflection</td>
<td>$O_0$</td>
<td></td>
</tr>
</tbody>
</table>

206
### Health specific

The rating scale ranges from zero to nine, where “1” represents a low level of arts engagement experienced when a person takes part in the stated activity, up to “9” which represent a high level of arts engagement experienced when they take part in the stated activity. Alternatively, you may not think that the stated activity is an arts activity at all, in which case you would rate the activity as “0” or not an arts activity.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Not an Arts Engagement Activity</th>
<th>Amount of arts experienced by a person when they engage in the activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Making works of art as part of a workshop or therapy session to improve wellbeing/health (e.g. in a community, hospital or health care setting)</td>
<td>O_0</td>
<td>O_1 O_2 O_3 O_4 O_5 O_6 O_7 O_8 O_9</td>
</tr>
<tr>
<td>Making works of art, banners, posters etc as part of a workshop to promote wellbeing/health e.g. fruit sculptures to promote healthy eating</td>
<td>O_0</td>
<td>O_1 O_2 O_3 O_4 O_5 O_6 O_7 O_8 O_9</td>
</tr>
<tr>
<td>Participating in an arts project/workshop as a result of a referral or arts prescription as practised in the United Kingdom</td>
<td>O_0</td>
<td>O_1 O_2 O_3 O_4 O_5 O_6 O_7 O_8 O_9</td>
</tr>
<tr>
<td>Teaching or facilitating an arts class, workshop or training program e.g. writing skills to improve or promote wellbeing/health</td>
<td>O_0</td>
<td>O_1 O_2 O_3 O_4 O_5 O_6 O_7 O_8 O_9</td>
</tr>
</tbody>
</table>

### Other Activities / Events

The rating scale ranges from zero to nine, where “1” represents a low level of arts engagement experienced when a person takes part in the stated activity, up to “9” which represent a high level of arts engagement experienced when they take part in the stated activity. Alternatively, you may not think that the stated activity is an arts activity at all, in which case you would rate the activity as “0” or not an arts activity.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Not an Arts Engagement Activity</th>
<th>Amount of arts experienced by a person when they engage in the activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visiting an artist studio</td>
<td>O_0</td>
<td>O_1 O_2 O_3 O_4 O_5 O_6 O_7 O_8 O_9</td>
</tr>
<tr>
<td>Visiting an art gallery</td>
<td>O_0</td>
<td>O_1 O_2 O_3 O_4 O_5 O_6 O_7 O_8 O_9</td>
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<tr>
<td>Visiting a museum</td>
<td>O_0</td>
<td>O_1 O_2 O_3 O_4 O_5 O_6 O_7 O_8 O_9</td>
</tr>
<tr>
<td>Visiting an aquarium</td>
<td>O_0</td>
<td>O_1 O_2 O_3 O_4 O_5 O_6 O_7 O_8 O_9</td>
</tr>
<tr>
<td>Organising or managing arts related projects, events and performances</td>
<td>O_0</td>
<td>O_1 O_2 O_3 O_4 O_5 O_6 O_7 O_8 O_9</td>
</tr>
<tr>
<td>Working in the arts as an artist</td>
<td>O_0</td>
<td>O_1 O_2 O_3 O_4 O_5 O_6 O_7 O_8 O_9</td>
</tr>
<tr>
<td>Working in the arts as an arts administrator, academic etc</td>
<td>O_0</td>
<td>O_1 O_2 O_3 O_4 O_5 O_6 O_7 O_8 O_9</td>
</tr>
<tr>
<td>Being a member of an arts organisation/society/club</td>
<td>O_0</td>
<td>O_1 O_2 O_3 O_4 O_5 O_6 O_7 O_8 O_9</td>
</tr>
<tr>
<td>Being a member of a sports organisation/club</td>
<td>O_0</td>
<td>O_1 O_2 O_3 O_4 O_5 O_6 O_7 O_8 O_9</td>
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<tr>
<td>Participating in arts related competitions</td>
<td>O_0</td>
<td>O_1 O_2 O_3 O_4 O_5 O_6 O_7 O_8 O_9</td>
</tr>
<tr>
<td>Going on holiday</td>
<td>O_0</td>
<td>O_1 O_2 O_3 O_4 O_5 O_6 O_7 O_8 O_9</td>
</tr>
<tr>
<td>Arts related philanthropy</td>
<td>O_0</td>
<td>O_1 O_2 O_3 O_4 O_5 O_6 O_7 O_8 O_9</td>
</tr>
<tr>
<td>Sports related philanthropy</td>
<td>O_0</td>
<td>O_1 O_2 O_3 O_4 O_5 O_6 O_7 O_8 O_9</td>
</tr>
<tr>
<td>Activity</td>
<td>Not an Arts Engagement Activity</td>
<td>Amount of arts experienced by a person when they engage in the activity</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>---------------------------------</td>
<td>---------------------------------------------------------------------</td>
</tr>
<tr>
<td>Conducting arts related research</td>
<td>0</td>
<td>0 0 0 0 4 5 0 7 9</td>
</tr>
<tr>
<td>Attending an arts related charity event</td>
<td>0</td>
<td>0 0 0 0 4 5 0 7 9</td>
</tr>
<tr>
<td>Attending an artist talk or lecture</td>
<td>0</td>
<td>0 0 0 0 4 5 0 7 9</td>
</tr>
<tr>
<td>Attending an arts related conference or symposium</td>
<td>0</td>
<td>0 0 0 0 4 5 0 7 9</td>
</tr>
<tr>
<td>Attending an art market</td>
<td>0</td>
<td>0 0 0 0 4 5 0 7 9</td>
</tr>
<tr>
<td>Participating in arts related voluntary work</td>
<td>0</td>
<td>0 0 0 0 4 5 0 7 9</td>
</tr>
<tr>
<td>Participating in arts related voluntary work</td>
<td>0</td>
<td>0 0 0 0 4 5 0 7 9</td>
</tr>
<tr>
<td>Participating in a game of sport</td>
<td>0</td>
<td>0 0 0 0 4 5 0 7 9</td>
</tr>
<tr>
<td>Watching sport on television</td>
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<td>0 0 0 0 4 5 0 7 9</td>
</tr>
<tr>
<td>Attending a live sports event as a spectator</td>
<td>0</td>
<td>0 0 0 0 4 5 0 7 9</td>
</tr>
<tr>
<td>Gardening at home</td>
<td>0</td>
<td>0 0 0 0 4 5 0 7 9</td>
</tr>
<tr>
<td>Putting on makeup before going to work/dinner/an outing etc</td>
<td>0</td>
<td>0 0 0 0 4 5 0 7 9</td>
</tr>
<tr>
<td>Cooking at home</td>
<td>0</td>
<td>0 0 0 0 4 5 0 7 9</td>
</tr>
<tr>
<td>Attending a family gathering</td>
<td>0</td>
<td>0 0 0 0 4 5 0 7 9</td>
</tr>
<tr>
<td>Attending a night club or bar with friends to dance, socialise and have fun</td>
<td>0</td>
<td>0 0 0 0 4 5 0 7 9</td>
</tr>
<tr>
<td>Completing formal arts training at a university, community college etc</td>
<td>0</td>
<td>0 0 0 0 4 5 0 7 9</td>
</tr>
<tr>
<td>Travelling to an arts event/venue e.g. by car, bus, train, walking</td>
<td>0</td>
<td>0 0 0 0 4 5 0 7 9</td>
</tr>
</tbody>
</table>

Why do you think people engage in the arts?

If you would like to make any comments please do so in the space provided below

Thank you for taking part in this study
B2.1 INTERVIEWS WITH THE GENERAL POPULATION

Invitation email – Interview recruitment

DO YOU PARTICIPATE IN THE ARTS OR ATTEND ARTS EVENTS?

The ‘Arts Engagement and Outcomes Study’ is interested in looking at the effect of arts involvement on participants and people who attend arts events. We aim to learn from those who take part in the arts by discussing how arts involvement makes them feel and what outcomes they get from participation.

The arts includes a range of art forms such as the visual arts (e.g. painting, craft, pottery), the performing arts/sound arts (e.g. music, dance, singing), literature, electronic/computer arts and community/cultural festivals.

What’s involved?
You are invited to nominate yourself for inclusion in the Arts Engagement and Outcomes Study by logging on to: http://uwa.qualtrics.com/SE/?SID=SV_4T5maR5Tk7jURmA
OR
calling 6488 5608

People who nominate for inclusion in the study will be selected at random and invited to participate in either a one hour focus group or a one hour interview session. The focus groups/interviews will occur from August to December 2010.

Incentive:
As a token of our appreciation and to compensate you for your time, we are offering participants who are invited to take part in a focus group or an interview 2 MOVIE TICKETS!

Criteria:
Participants need to be 18 years or over
Do you participate in the ARTS or attend ARTS events?

e.g. visual arts (e.g. painting, pottery), performing arts (e.g. music, dance, singing), literature, electronic/computer arts & community/cultural festivals.

What Is Involved?
You are invited to nominate yourself for inclusion in the Arts Engagement and Outcomes Study by logging onto:
www.sseh.uwa.edu.au/surveys
and clicking on "Arts Engagement and Outcomes Study - Nominate"

Or
calling 6488 5608

People will be selected at random and invited to participate in either a one hour focus group or an interview. The sessions will occur from August to December 2010.

Incentive:
As a token of our appreciation and to compensate you for your time, we are offering participants who are selected for a focus group or an interview **2 MOVIE TICKETS!**

Criteria:
Participants need to be 18 years or older

The "Arts Engagement and Outcomes Study" is interested in looking at the effect of arts involvement on participants. We aim to learn from those who take part in the arts by discussing how arts involvement makes them feel and what outcomes they get from participation.

If you have any questions about this project please contact Christina Hills at The University of Western Australia via telephone 08 6488 5608 or email christina.mills@uwa.edu.au.

As this study is part of Christina's PhD, you can also contact her supervisor Associate Professor Michael Rosenberg on 08 648 4654 or email michael.rosenberg@uwa.edu.au.
Do you participate in the ARTS or attend ARTS events?

e.g. visual arts (e.g. painting, pottery), performing arts (e.g. music, dance, singing), literature, electronic/computer arts & community/cultural festivals.

What Is Involved?
You are invited to nominate yourself for inclusion in the Arts Engagement & Outcomes Study by logging onto:
www.csseh.uwa.edu.au/surveys
and clicking on 'Arts Engagement and Outcomes Study - Nominate'.
Or calling 6488 5608

People will be selected at random and invited to participate in either a one hour focus group or an interview. The sessions will run from August to December 2010.

Incentive: As a token of our appreciation and to compensate you for your time, we are offering participants who participate in a focus group/interview
2 MOVIE TICKETS!

Criteria: Participants need to be 18 years or older

The 'Arts Engagement and Outcomes Study' is interested in looking at the effect of arts involvement on participants. We aim to learn from those who take part in the arts by discussing how arts involvement makes them feel and what outcomes they get from participation.

If you have any questions about this project please contact Christina Mills at The University of Western Australia via telephone 6 488 5608 or email christina.mills@uwa.edu.au.
As this study is part of Christina's PhD, you can also contact her supervisor Associate Professor Michael Rosenberg on 6 488 4554 or email michael.rosenberg@uwa.edu.au.
Online nomination form

Arts Engagement and Outcomes Study

Nomination Form

The Arts Engagement and Outcomes Study is interested in looking at the effects of arts involvement on participants. We aim to learn from those who take part in the arts by discussing how arts involvement makes them feel and what outcomes they get from participation. Focus groups and interviews for this study will occur from August to December 2010. It is anticipated that a focus group or interview session should take approximately 1 hour.

If you would like to nominate yourself for possible inclusion in this study please fill in the form below. It should be noted that only 40 to 50 participants will be selected (from the pool of people who nominate) (i.e. it is possible that not everyone who nominates will be invited to attend a focus group or interview session). For reasons of fairness and study validity participants will be chosen at random. If you agree to complete the form below you do not have to answer any questions that you do not wish to and if selected as a participant you can opt out of the study at any time. The information collected will only be used for research purposes.

If you have any questions about this study please contact either Christine Mills on 6488 6800 or her PhD supervisor Associate Professor Michael Rossiello on 6488 5508.

*Acknowledgement: This study is funded via a Healthway Research Support Grant and has been approved by the University of Western Australia Human Research Ethics Committee ref: RVH/EC/430.

Q1. Name:
   - First Name (e.g. Jane)
   - Last Name (e.g. Smith)

Q2. Contact email and phone numbers:
   - Email address:
   - Mobile phone number:
   - Home/office phone number:

Q3. When would be the most convenient day/time for you to attend an interview or focus group session? (Please check all that apply)

<table>
<thead>
<tr>
<th>Day</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
<th>Sunday</th>
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</thead>
<tbody>
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<tr>
<td>Other</td>
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<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

Q4. In the last 3 months, how did you participate in the arts? (Please check all that apply)

- I actively made or created art (e.g. played a musical instrument, wrote a story, painted a picture)
- I have attended one or more arts events, concerts, plays or festivals
- I am a member of an arts organisation, club or society
- I volunteer my time to an arts organisation, club or society
- I teach an arts-related course/activity
- I am learning about the arts via an arts-related course, workshop, degree etc.
- I manage or organise arts events
- Other (please specify)
Q6. What types of art do you take part in?  
This includes attending events, creating art, volunteering, teaching/learning etc.  
(please circle all that apply)

- Visual arts, decorative design and craft (e.g. painting, photography, pottery/ceramics, scrapbooking, sewing, knitting, 
drawing, jewellery, manual arts etc.)
- Sound and Performing Arts (e.g. dance, film, theatre/plays, music, singing, circus)
- Literature
- Online, Computer and Electronic Arts
- Community and Cultural Festivals, Fairs and Events (e.g. Big Day Out, Perth Royal Show, Day on the Green, 
Southbound, Blues & Roots Festival)
- Other (please specify)

Q6. In the last 3 months, which 'one' specific arts activity have you engaged in the most?  
(e.g. painting, going to the theater, singing, attending music festivals)

Q7. How would you describe your engagement in the Arts?  
(please circle all that apply)

- The arts are a hobby/fun activity that I like to do in my leisure time
- I am an amateur artist
- I am a professional artist
- Other (please specify)

Q8. Gender:

- Male
- Female

Q9. Age group:

- 16 or less
- 16 to 29 years
- 30 to 55 years
- 50 to 58 years
- 60+ years

Q10. Highest level of education attained:

- Primary school or high school
- TAFE certificate / diploma
- University degree or higher degree
- Other (please specify)

Q11. Occupation:

Q12. Home postcode or suburb:

Q13. Consent:

I would like to nominate myself for inclusion in the Arts Engagement and格罗马克斯 study. I understand that even though I have nominated myself for inclusion in this study that actual participants will be selected at random and contacted via the telephone/email to participate in a focus group or interview session.

I give permission for research staff related to this study to contact me using the details provided above.

- I give my consent to take part in this study
- I do not give my consent to take part in this study
HEALTHY ARTS INTERVIEW GUIDE

Thanks for meeting with me today. The ‘Arts Engagement and Outcomes Study’ aims to look at the effect of being involved in the arts. Being involved in the arts includes many art forms such as the visual arts, the performing arts, literature and community festivals. You might participate in one or more of these art forms. During this interview, I will be asking you about your own experiences and views about the art forms that you participate in. I have a list of questions to ask you. There are no right or wrong answers. The interview should take approximately 1 hour.

Firstly ... could I ask you to read and complete a consent form and background questionnaire...

→ Hand out INFORMATION SHEET
→ Hand out and collect SIGNED CONSENT FORM

Tape recording: If it’s ok with you I’d like to record our discussion. This is so that I don’t miss anything. I’d like to assure you that anything you say is confidential and no names will be used in any reports or on the typed transcripts. Also, the tapes will be destroyed after they have been transcribed.

Before we start … Do you have any questions?

Tell me about your MOST RECENT experience of participating in the Arts
- What have you done or been to lately?

1. Tell me about the type of art that you do the most?____________________________________

Prompt:
- How often do you do it
- What do you like to make/create? What is your art about (concept)
- What are you working on at the moment?

2. If you were to describe to a friend or family member why you participate in __________ (q1), what would you say?

Prompt:
- What motivates you / why is it important to you
- What do you get out of it
- What are the best things about being involved in __________?

3. Are there any other types of art you are involved in or arts events you have been to in the last three months?

Prompt:
- I’m a painter, but I also do a bit of jewellery and photography
- Have you attended any concerts, plays or festivals lately
- Types, participate, attend
4. We are going to do this next task by using stickmen on paper. We will discuss responses as we go.
(NB if the participant is female then the stickmen are female; if male the stickmen are male; in terms of arts engagement refer to participant web survey info i.e. if in the last three months the participant has painted and attended a music concert then so has Laura/John)

I’d like to introduce you to two different people (Show CARD). Like you, Laura/John participates in the arts. In the last three months Laura/John has ............ . Jane/Tim never participates in the arts.

A. Outcomes (positive, negative, unintended)
How do you think arts engagement positively effects Laura’s/John’s life?
• Do you think the arts positively effects their health or wellness?

How do you think arts engagement negatively effects Laura’s/John’s life?
• Do you think the arts negatively effects their health or wellness?

Do you think Laura/John would experience any unintended outcomes or consequences as a result of engaging in the arts?

How do you think arts engagement makes Laura/John feel?

If Jane/Tim was to start engaging in the arts how would his/her life change?

B. Barriers and facilitators to arts engagement
Could you list for me things that you think stops Jane/Tim from participating in the arts?

If you were to try to promote participation in the arts to Jane/Tim what would you say to him/her?

5. Do you have any comments or anything you would like to tell me about your engagement in the arts?

Thank you for your time ... if you have anything else you would like to discuss or think of something else that you would like to add please get in touch with me.... my contact details are at the bottom of the information sheet
Visual prompt – Interviewee female

**Laura**
Participates in the arts

**Jane**
Does not participate in the arts

**Positive**

**Negative**

**Unintended**

**Feel**

If Jane was to start engaging in the arts how would her life change?

Things that stop Jane engaging in the arts?

**Arts Promotion**
Visual prompt – Interviewee male

Positive

Negative

Unintended

Feel

If Tim was to start engaging in the arts how would his life change?

Things that stop Tim engaging in the arts?

Arts Promotion

John
Participates in the arts

Tim
Does not participate in the arts
B3.1 HEALTHY ARTS TELEPHONE SURVEY

Good morning/afternoon/evening, my name is .................. from the ECU Survey Research Centre. We are conducting a survey on community participation and wellbeing on behalf of The University of Western Australia.

The survey will take approximately 15 to 20 minutes to complete. I would like to speak to the person in your household aged 18 years or older whose birthday falls closest to today. **IF UNAVAILABLE ARRANGE A SUITABLE CALL BACK TIME. RE-INTRODUCE IF NECESSARY. IF NO, CLOSE.**

Before we begin, I want to assure you of confidentiality for any answers you may give, and let you know that parts of this survey may be listened to for training and quality control purposes. Also, all questions are voluntary and there are no right or wrong answers.

**RECORD GENDER**

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<thead>
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<th>Code</th>
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</tr>
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</tr>
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**RECORD LOCATION**

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</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

First I would like to ask you about your involvement in your community and things you have taken part in during the year.

1a. In the last **12 months**, have you engaged in any of the following activities, **at least once a week**, for most weeks:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Yes</th>
<th>No</th>
<th>DK/Refused</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participated in any outdoor or indoor sports activities</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Attended a professional or amateur game of sport</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Participated in unpaid volunteer work</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Spent time with family or friends either at your home or in their home</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Spent time with family or friends at a café, pub, park, shopping mall or other public place</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Kept in touch with family or friends via email or networking sites such as Facebook, blogs or Myspace</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Attended religious services or events at a place of worship such as a church, mosque or temple</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
</tbody>
</table>

1b. In the last **12 months**, have you .......

<table>
<thead>
<tr>
<th>Activity</th>
<th>Yes</th>
<th>No</th>
<th>DK/Refused</th>
</tr>
</thead>
<tbody>
<tr>
<td>Been a member of a sports organisation, society or club</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Attended an important social occasion with family or friends such as a birthday party, wedding or anniversary</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Attended a public meeting in your local area about a local issue</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Taken a holiday or break from work for two consecutive weeks or more</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
</tbody>
</table>
 ***ARTS***

Now I’d like to ask you about your involvement in the arts.

When I talk about the arts, this includes the performing arts, visual arts, literature, electronic art and community or cultural festivals, fairs and events.

**Attend**

2a. In the last **12 months**, have you visited or attended any ......:

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>DK/Refused</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

... performing arts events like plays or theatre events, **arts house** movies, dance performances, music recitals, live performances and concerts

Visual arts events at galleries and studios or art exhibitions of things like paintings, sculptures, craft, photography, fashion, jewellery, ceramics or textiles

Literary events such as book launches, author talks or book readings

Community arts festivals, fairs or cultural performances

Artist talks or lectures about their work

Listened to or viewed an artwork, performance or literary event via a website, web stream or podcast

[Yes/No - if ‘no’ to all skip to **PARTICIPATE Q3a**]

2b. Specifically, which arts related events have you attended in the last 12 months

[NOTE TO INTERVIEWER: record type/name of event(s) e.g. Southbound, Fairbridge Festival, Royal Show, my sounds music performances, tafe exhibitions] [code up to 10]

2c. Approximately how many **days** in the last 12 months have you spent attending arts events?

____________ **days**  [1 to 365 days]

2d. On a **typical day** that you attend an arts related event, how many **hours** would you spend at that event? ____________ **hours**  [0 to 24 hours]

**Participate**

3a. In the last 12 months have you ......

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>DK/Refused</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Made or created any types of visual art such as paintings, drawings, craft, sculpture, photography, fashion, jewellery, ceramics or textiles

Written any literary types of art such as short stories, poetry, a novel or script

Made an electronic, digital or online art work such as an electronic painting, digital photography, animation, film or music recording

Participated in an event as a performer, dancer, singer, actor or musician

Participated in arts related rehearsals

[Yes/No - if ‘no’ to all skip to **LEARN Q4a**]

3b. What kinds of art have you made, created or actively participated in during the last 12 months?

[code up to 10]

3c. Approximately how many **days** in the last 12 months have you spent making, creating or actively participating in the arts? ________ **days**  [0 to 365 days]

3d. On a **typical day** that you make, create or actively participate in the arts, how many **hours** do you spend making, creating or actively participating? ________ **hours**  [0 to 24 hours]
Learn
4a. In the last 12 months did you take part in any arts related classes, workshops or training programs?  
[Yes/No - if ‘no’ skip to WORK/VOLUNTEER Q5a]
4b. What arts classes have you taken part in the last 12 months? [code up to 10]
4c. Approximately how many days in the last 12 months have you taken part in an arts related class, workshop or training program? ________ days [0 to 365 days]
4d. On a typical day that you take part in an art class, how many hours do you spend in class? ________ hours [0 to 24 hours]

Work or Volunteer
5a. In the last 12 months did you work in the arts either in paid employment or as a volunteer?  
[Yes/No - if ‘no’ skip to MEMBER Q6a; if YES, clarify and record if paid employment / volunteer / both]
5b. What types of arts related work, paid or voluntary, have you done in the last 12 months? [code up to 10]
5c. Approximately how many days in the last 12 months have you worked or volunteered your time to the arts? ________ days [1 to 365 days]
5d. On a typical day that you work or volunteer in the arts, how many hours do you spend working or volunteering? ________ hours [0 to 24 hours]

Member
6a. In the last 12 months, were you a member of an arts related society, club or organisation?  
[Yes/No - if ‘no’ skip to OTHER ARTS Q7a]
6b. Approximately how many days in the last 12 months have you spent attending meetings or participating in club activities? ________ days (0 to 365 days)
6c. On a typical day that you attend a meeting or club activity, how many hours would you spend at meetings or activities? ________ hours (0 to 24 hours)

Other Arts
7a. In the last 12 months, have you ....

<table>
<thead>
<tr>
<th>Activity</th>
<th>Yes</th>
<th>No</th>
<th>DK/Refused</th>
</tr>
</thead>
<tbody>
<tr>
<td>... downloaded any online movies, music or videos</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Bought a paperback, hard cover or electronic book in a store or online</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Bought a painting, sculpture or other art work made by a professional or amateur artist</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Engaged in any arts related philanthropy by funding or sponsoring an artist or arts event</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Attended an arts related conference or symposium</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
</tbody>
</table>
7b. [Ask 7b if respondent has engaged in the arts i.e. if ‘yes’ to 2a and/or 3a and/or 4a and/or 5a and/or 6a and/or 7a → else skip to q8a] Keeping in mind that the arts includes the performing arts, visual arts, literature, electronic art and community or cultural festivals, fairs and events. Please indicate your level of agreement with each of the following statements:

Strongly Agree................................. 5
Agree ............................................. 4
Neither agree nor disagree ............... 3
Disagree ........................................ 2
Strongly Disagree ............................ 1
(DK/refused – do not read out) ........... 9

i. The arts ... Help me to relax
ii. ... Have a positive effect on my life
iii. ... Help relieve stress
iv. ... Contribute to my overall wellbeing
v. ... Help me to stay healthy
vi. ... Give me self-confidence
vii. ... Contribute to my self esteem
viii. ... Help me to accept differences among people

(Adapted - Michalos & Kahlke 2010)

ix. The arts... expands my appreciation for people in society
x. ... Makes me feel good
xi. ... Is an enjoyable form of entertainment
xii. ... Is a way of meeting new people
xiii. ... Is a good way to spend time with family and friends
xiv. The arts ... Is expensive
xv. ... Is time consuming
xvi. ... Has a culture that encourages drinking alcohol
xvii. ... Has a culture that encourages smoking cigarettes
xviii. The arts enriches my life

(Based on interviewee responses- Phase 2)

xix. The arts maintains or increases ... my knowledge and skills
xx. ... My level of participation in physical activity. For example walking, dancing or standing for long periods of time
xxi. ... My level of participation in cognitive activities. For example reading, creating something, learning something new
xxii. ... My level of participation in social activities with family or friends
xxiii. ... My level of participation in community events
xxiv. ... My level of participation in formal or informal groups, clubs or organisations

(Adapted from paper by Donovan and Egger 2007Happiness and mental health: the flip side of S-AD)

7c. [Ask 7c if respondent has engaged in the arts i.e. if ‘yes’ to 2a and/or 3a and/or 4a and/or 5a and/or 6a and/or 7a → else skip to q8a] In the last 12 months, when engaging in the arts, have you done any of the following:

<table>
<thead>
<tr>
<th>Activity Description</th>
<th>Yes</th>
<th>No</th>
<th>DK/Refused</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stood for 30 minutes or more at a time. For example while doing an activity such as painting or drawing while attending a concert or live performance</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>→ if yes ask “what was the event”? (record verbatim)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Walked for 30 minutes or more. For example, to get around at a festival or fair or live performance</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>→ if yes ask “what was the event”? (record verbatim)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Danced for 30 minutes or more</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>→ if yes ask “what was the event”? (record verbatim)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are there any other ways that the arts helps you to be physically active?</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>→ if yes ask “what was the physical activity and what was the arts event”? (record verbatim)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
QUALITIES AND EMOTIONS

8a. Does the thought of making, creating or actively participating in the arts make you feel ....

<table>
<thead>
<tr>
<th>Emotion</th>
<th>Yes</th>
<th>No</th>
<th>DK/Refused</th>
</tr>
</thead>
<tbody>
<tr>
<td>Happy</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Excited</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Stressed</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Relaxed</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Content</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Embarrassed</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Awkward</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Uneasy</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
</tbody>
</table>

8b. For each of the following, please indicate whether or not they are important to you.

Not at all important .......................... 1
Not important.................................. 2
Neither important nor not important....3
Important ...................................... 4
Very important ............................... 5
(DK / refused / NA – do not read out) ... 9

How important is ...Imagination
  i. ...Tolerance and respect for others
  ii. ...Family
  iii. ...Friends
  iv. ...Leisure time
  v. ...Work
  vi. ...Creativity  (Adapted from World Values Survey 2005)
  vii. ...Self-expression  (from interviews)
  viii. ...Social interaction with others
  ix. ...Physical activity
  x. ...Spending time with others
  xi. ...Having good friends to talk problems over with
       (Adapted from Donovan et al, 2007)
xii. ...Keeping your mind active

***HEALTH OUTCOMES***

The next set of questions relate to your health and wellbeing.

GENERAL HEALTH  (NOTE TO CM → q9a from Windsor #71, Q9b adapted from Windsor #71; Q9c-d adapted from WHOQoL-Bref 2000 → Physical health)

9a. How is your health in general? Would you say it is ...

  Very good...................................... 5
  Good ........................................... 4
  Fair ............................................ 3
  Bad .............................................. 2
  Very bad ...................................... 1
  (DK/refused/NA – don’t read out) ... 9

9b. Do you have any long standing illnesses or disabilities that limits your activities or effects how you live your everyday life? By longstanding I mean anything that has troubled you over a period of 6 months or more or that is likely to affect you in the future.  (Yes 1 / No 2 / Don’t know or refused 9)
9c. Do you currently need any medical treatment to function in your daily life?  (Yes 1 / No 2 / Don’t know or refused 9)

9d. Does physical pain prevent you from doing what you need to do in your daily life?  (Yes 1 / No 2 / Don’t know or refused 9)

SUBJECTIVE WELLBEING (NOTE TO CM → q10 Personal Wellbeing index from International Wellbeing Group)

10a. Thinking about your own life and your personal circumstances, how satisfied are you with your life as a whole? Please use a scale from 0 to 10. Zero means you feel completely dissatisfied, 10 means you feel completely satisfied. The middle of the scale is 5, which means you feel neutral, that is neither satisfied nor dissatisfied.

10b. ...Turning now to various areas of your life... How satisfied are you with your standard of living?

10c. ... with your health?

10d. ... with what you are currently achieving in life?

10e. ... with your personal relationships?

10f. ... with how safe you feel?

10g. ... with feeling part of your community?

10h. ... with your future security?

<table>
<thead>
<tr>
<th>completely dissatisfied</th>
<th>neutral</th>
<th>completely satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>

MENTALLY HEALTHY

11a. In the past four weeks did you intentionally do anything to keep yourself ‘mentally healthy’? This could include activities that make you feel good, reduce your stress and help you to relax and could relate to activities that you do in your community or with friends and family.  (Yes 1 / No 2 / Don’t know or refused 9)

11b. If “YES”: What did you do? _______________________________________

12a. Next I am going to read out some statements about feelings and thoughts. Please indicate the response that best describes your experience of each over the last two weeks.

   All of the time......................... 5
   Often .................................... 4
   Some of the time....................... 3
   Rarely .................................... 2
   None of the time ........................ 1

   i.  I’ve been feeling optimistic about the future
   ii. I’ve been feeling useful
   iii. I’ve been feeling relaxed
   iv.  I’ve been feeling interested in other people
   v.   I’ve had energy to spare
   vi.  I’ve been dealing with problems well
   vii. I’ve been thinking clearly
   viii. I’ve been feeling good about myself
   ix.  I’ve been feeling close to other people
   x.   I’ve been feeling confident
   xi.  I’ve been able to make up my own mind about things
   xii. I’ve been feeling loved
   xiii. I’ve been interested in new things
   xiv. I’ve been feeling cheerful

(WEMWBS)
I've been feeling happy
I've been enjoying life
I've been feeling worthwhile
I've been feeling energised
I've been feeling criticised
I've been feeling marginalized from other people
I've been feeling stressed
I am content with who I am

12b. Overall, would you say you are currently ....

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Very happy</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Happy</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Neutral, that is neither happy nor unhappy</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Unhappy</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Very unhappy</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**HEALTH BEHAVIOURS**

**SMOKING**

13. Which of the following best describes your cigarette smoking status? [Read out]

I smoke daily..................................................................... 1
I smoke occasionally.............................................................. 2
I don't smoke now but I used to........................................... 3
I've tried it a few times but never smoked regularly.......... 4
I've never smoked.................................................................. 5
Don't know/Refused (do not read out) ..................................... 9

**PHYSICAL ACTIVITY**

14. On how many days in the last week did you exercise for recreation, sport, health or fitness for at least 30 minutes? (e.g. walking, swimming, cycling, aerobics, running, tennis)?

0........1........2........3........4........5........6........7 days

Don't know/Refused (do not read out) ................................. 9

**HEALTHY EATING**

15a. On how many days in the last week did you eat at least two pieces of fruit?

0.....1.....2.....3.....4.....5.....6.....7 days

Don't know/Refused (do not read out) ................................. 9

15b. On how many days in the last week did you eat enough vegetables to fill at least two tea cups?

0.....1.....2.....3.....4.....5.....6.....7 days

Don't know/Refused (do not read out) ................................. 9
15c. On how many days in the last week did you eat meals or snacks such as burgers, pizza, fried chicken or chips from places like McDonalds, KFC and Hungry Jacks?

0........1........2........3........4........5........6........7 days

Don’t know/Refused (do not read out) ........9

ALCOHOL
16a. On how many days of the week do you usually drink alcohol?

0........1........2........3........4........5........6........7 days

Don’t know/Refused (do not read out) ........9  [If "0", skip to Q17]

16b. A standard drink is equivalent to a midi of full strength beer, a glass of wine or a nip of spirits. On a day when you drink alcohol, how many standard drinks do you usually have? _________

SUNBURNED
17 How many times did you get sunburnt in the past 12 months (even just your nose or shoulders)?

Not at all.............................................................. 1
Once or twice....................................................... 2
Three to five times.............................................. 3
Six to ten times.................................................... 4
More than ten times............................................. 5

TV and COMPUTER USE
18 On average how many hours per week do you spend watching television _______hrs

19 Outside of your workplace, on average how many hours per week do you spend using a computer? ________hrs

***DEMOGRAPHICS***
Before ending the interview, I would like to ask you some background information

20. In which age group do you fit? (READ OUT)

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-24 years</td>
<td>1</td>
</tr>
<tr>
<td>25-29 years</td>
<td>2</td>
</tr>
<tr>
<td>30-34 years</td>
<td>3</td>
</tr>
<tr>
<td>35-39 years</td>
<td>4</td>
</tr>
<tr>
<td>40-44 years</td>
<td>5</td>
</tr>
<tr>
<td>45-49 years</td>
<td>6</td>
</tr>
<tr>
<td>50-54 years</td>
<td>7</td>
</tr>
<tr>
<td>55-59 years</td>
<td>8</td>
</tr>
<tr>
<td>60 years and over</td>
<td>9</td>
</tr>
<tr>
<td>Refused</td>
<td>99</td>
</tr>
</tbody>
</table>
21. What is your current occupation?

Manager/administrator................................................................. 1
Professional / para professional.................................................. 2
Trades person................................................................................. 3
Clerk.............................................................................................. 4
Salesperson or personal service worker........................................ 5
Plant or machine operator/ driver .............................................. 6
Labourer ....................................................................................... 7
Unemployed .................................................................................. 8
Home duties .................................................................................. 9
Retired .......................................................................................... 10
Student ......................................................................................... 11
Other [Specify] ............................................................................. 12
(Don't know/refused).................................................................... 99

Height
22a. What is your approximate height in feet and inches or centimetres?
[Use EITHER feet/inches OR centimetres] Enter "0" into unused fields
(Don't know/refused).................................................................... 99

Weight
22b. What is your approximate weight in pounds, stones or kilograms?
[Use EITHER stones/pounds OR kilograms] Enter "0" into unused fields
(Don't know/refused).................................................................... 99

Household
23a. Including yourself, how many adults aged 18 years or over live in your household? _____
(Don't know/refused).................................................................... 99

23a. How many children aged 17 years or younger live in your household? _____
(Don't know/refused).................................................................... 99

Ethnicity
24. Which country are you originally from? [DO NOT READ OUT] SR

Australia 1
New Zealand 2
Other (specify) _________ 3
Refused 8

25. Do you consider yourself to be Aboriginal and/or Torres Strait Islander (READ OUT) SR

Yes ....................... 1
No ......................... 2
Refused ................. 99

26 In which of these brackets does the total income of all household members fall?

Less than $20,000........................................................................ 1
$20,000 to $39,999................................................................. 2
$40,000 to $59,999................................................................. 3
$60,000 to $79,999................................................................. 4
$80,000 to $99,999................................................................. 5
$100,000 to $119,999............................................................. 6
$120,000 to $139,999............................................................. 7
$140,000 or more ................................................................. 8
Don't know/refused.................................................................. 99
27  How would you describe your marital status:

Never married ........................................................................................................ 1
Defacto / living with a partner.............................................................................. 2
Married................................................................................................................... 3
Separated or divorced ......................................................................................... 4
Widowed............................................................................................................... 5
Don't know/refused............................................................................................ 99

28  What is the highest level of education you have attained?

Primary school..................................................................................................... 1
High school ........................................................................................................... 2
TAFE certificate or diploma................................................................................ 3
University degree or higher degree.................................................................... 4
Other (please specify) ........................................................................................ 5
Don't know/refused............................................................................................ 99

29  And finally, what is your postcode? ___________