

Benefits of group singing for community mental health and wellbeing

Survey and literature review

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Building health through social connection and the arts

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Executive summary

The aim of the VicHealth-funded project presented here was to explore the mental and social health benefits of singing in groups for both the individual singers and for the community. Our survey attempted to address the main gaps identified by the literature and, in particular, to gather information on singing-related mental health and wellbeing at the individual level (social connectedness, social support) and at the community level (social capital, civic and community engagement).

More than 300 questionnaires were distributed to current members of singing groups across Victoria. Participants were recruited online by email and in person through existing singing groups via their leaders. Of the 220 surveys received, approximately 50% were completed online, which appeared to enhance the male response rate.

Four research questions guided the exploration of the potential relationships between singing in groups and social support, mental wellbeing and involvement in social action and civic engagement.

1. How do participants describe their own experience of singing in groups?

Three main themes emerged from two open-ended questions enquiring into people's reasons for singing in a group and the motivations that drew them to sing with their current group: singing and music; social connection; health and wellbeing.

2. Does singing in groups increase experiences of social support?

There appears to be greater social support available to those who sing in groups from friends and family compared with what is available to the average Victorian or Australian. However, singing group members seem to expect less support from neighbours, perhaps because of their broader social networks overall.

3. Do singing group members report greater levels of wellbeing, perceived happiness and health than the general population?

The survey respondents reported being highly satisfied with their standard of living, future security, level of safety and feeling part of their community; they rated non-material pleasures such as music, singing and nature more highly than activities like work or shopping, despite the fact that their overall satisfaction with life, their health and relationships was lower than might be expected. While their relative affluence is likely to be an overarching contributor to most of these aspects of their wellbeing, it is feasible to

consider that their involvement in communal singing is an influence on their sense of safety and inclusion within their community, both of which were significantly higher than that of the general population. At the very least, it seems that poor health and increasing age do not represent the barriers to participation in a singing group that might be the case with sporting and other physical activities.

4. Do singing group members report increased levels of social action and volunteering since joining their group?

Although survey respondents reported being highly involved in their communities in a number of ways, it is not possible to tell how much their singing group involvement enhanced the likelihood of their participation elsewhere. Close to half of our respondents reporting being more involved in community activities since joining their group, but the remaining responses were somewhat ambiguous on this question.

The jury remains out on the most appropriate ways of capturing and measuring indicators of community wellbeing as potential outcomes of arts activities. However the weight of findings in the available evidence base does suggest that group singing is a powerful personal and social health promotion activity. Findings on the improved social as well as personal dimensions of mental health and wellbeing that are associated with singing in groups are strong and consistent. Numerous studies utilising different research designs and methodological approaches have reported the following benefits of singing in groups:

- increased self-confidence, empowerment, wellbeing and interpersonal skills
- a general lifting of the spirits and a sense of joy and accomplishment
- lowered feelings of social isolation, depression and anxiety
- increased social capital through participation in social, cultural and community activities
- denser social and friendship networks.

1.0 Introduction

Participating in 'the arts' has been variously claimed to offer health benefits, social benefits and community benefits. In Australia at least, there is a wave of interest in art as a tool for therapy, social justice, health promotion, enhancing community wellbeing and boosting local economies. This increasing attention has been both welcomed and resisted by 'artists' of all kinds. And as governments consider calls for increased funding of artistic initiatives on the basis of their purported benefits for individuals and communities, questions of evidence arise.

This report presents the findings from a research project, conducted by the Wellness Promotion Unit at Victoria University and funded by VicHealth, which examined group singing and its associated health and wellbeing benefits. Singing in groups has become the number one community arts activity in Victoria and is a popular community arts activity across Australia and other parts of the world (Community Music Victoria, 2006). There is now growing evidence to suggest that singing in groups is not only an enjoyable special interest activity but can also be beneficial for the health and wellbeing of individuals and communities.

Benefits for individual mental health that are associated with singing in groups include increased levels of social connectedness, increased sense of belonging, physical and emotional benefits, and reduced personal stress (Bailey & Davidson, 2005; Clift & Hancox, 2001). Furthermore, it is argued that group-forming activities such as community-based singing can facilitate the development of social capital that in itself positively impacts on physical and psychological wellbeing at individual, relational and community levels. Singing-related benefits associated in the literature with community mental health include increased levels of social capital/civic engagement, contributions of groups to community cohesiveness, and tolerance for diversity (Chorus America, 2003; Putnam, 1995).

The Victorian Health Promotion Foundation (VicHealth) was established in 1987 as the world's first health promotion foundation. VicHealth has gained a reputation for its holistic approach to mental health that encompasses the social elements contributing to health and wellbeing. VicHealth (1999) defines mental health as "... the embodiment of social, emotional and spiritual wellbeing. Mental health provides individuals with the vitality necessary for active living, to achieve goals and to interact with one another in ways that are respectful and just".

In recent years, VicHealth has funded a number of community arts initiatives based on a growing body of evidence indicating that social connectedness and participation are conducive to individual and community health and wellbeing (e.g., Hyypä & Mäki, 2003). In the context of a social model of health, group singing could be described as a 'universal' health promotion activity, aimed at a whole population. Singing has become one of the most prominent community-based arts initiatives, at least in Victoria. Since 2001, VicHealth has invested nearly half a million dollars in Community Music Victoria's *Victoria Sings* program, designed to stimulate community-based singing throughout the State, with a view to strengthening communities and supporting the mental health and wellbeing of community members (Community Music Victoria, 2006).

The aim of the VicHealth-funded study presented here was to explore the mental and social health benefits of singing in groups for both the individual singers and for the community. An extensive literature review that also formed part of the project identified gaps in evidence on the impacts of singing in groups for health and wellbeing which the present study sought to address (Astbury, Gridley & Sharples, in press).

1.1 Aims

In 2007 VicHealth commissioned the Wellness Promotion Unit at Victoria University to investigate the singing-related benefits associated with:

- individual mental health, such as increased levels of social connectedness, increased sense of belonging, physical and emotional benefits, and reduced personal stress
- community mental health, such as increased levels of social capital/civic engagement, contributions of groups to community cohesiveness, and tolerance for diversity.

Four research questions guided the exploration of the potential relationships between singing in groups and social support, mental wellbeing and involvement in social action and civic engagement:

1. How do participants describe their own experience of singing in groups?
2. Does singing in groups increase experiences of social support?
3. Do singing group members report greater levels of wellbeing, perceived happiness and health than the general population?

4. Do singing group members report increased levels of social action and volunteering since joining their group?

2.0 Method

One set of questions arises in relation to the most appropriate ways of capturing and measuring the indicators of wellbeing, especially at a community level. In a review of the purported health benefits of community-based arts initiatives, McQueen-Thomson and Ziguras (2002) cautioned that, whilst the benefits of participation in community-based arts initiatives are well documented, the literature can be improved through research that focuses on (i) known determinants of health rather than broad social indicators, (ii) participants and audiences rather than organisers, (iii) large sample sizes, and (iv) longitudinal research.

In addition to these recommendations, the incorporation of a qualitative approach permits the added possibility that previously unknown determinants might emerge. Perhaps more importantly, a qualitative component can ensure that the voices of the art-makers themselves do not become lost amid the volume of statistics generated by large-scale measurement-based studies.

We designed a survey to address the main gaps identified by the literature and to gain an understanding of the health benefits of singing in groups. In particular, the survey sought information on singing-related mental health and wellbeing at the individual level (social connectedness, social support) and at the community level (social capital, civic and community engagement) from participants who currently sing in groups.

2.1 Procedure

More than 300 questionnaires were distributed to current members of singing groups across Victoria. Singing groups were loosely defined to encompass any groups from performing choirs to informal community gatherings, although it was not feasible to include occasional or 'one-off' groups along the lines of Faye White's popular 'Vocal Nosh' model because some continuity of experience was essential to the survey design. Participants were recruited online by email and in person through existing singing groups via their leaders, with a number being completed on site at the Boite Singers Festival in Daylesford, as well as at rehearsals of the Melbourne Millennium Chorus in Abbotsford and Opera in the Alps in

Beechworth. Of the 220 surveys received, approximately 50% were completed online. It is worth noting that the male participation rate was substantially higher in the online version of the survey than in the hard copy version.

2.2 The singing group survey

Questions for the survey were derived from a broad based review of previous research studies conducted into the health benefits of singing, including group singing (Astbury, Gridley & Sharples, in press). The questionnaire contained five sections:

- *Section 1:* contained three open-ended questions asking respondents about the experience of singing in a group and what drew them to join their particular singing group.
- *Section 2:* asked respondents to rate a series of statements about their level of contribution and commitment to their singing group as well as to other community activities.
- *Section 3:* consisted of 10 items that enquired into the level of social support given and received by respondents. These items were adapted from social support measures featured in the General Social Survey on Social Engagement in Canada (Statistics Canada, 2003) and from the General Social Survey (ABS, 2006).
- *Section 4:* contained two self-report items measuring satisfaction with overall physical and mental health, followed by 10 self-report items answered on a 10-point scale measuring domains of wellbeing adapted from the Personal Wellbeing Index – Adult (PWI – A: International Wellbeing Group, 2006). The domains of wellbeing that were measured in the survey included: standard of living, health, achieving in life, relationships, safety, community connectedness, future security, social support and spirituality/religion. This section concluded with eight self-report items answered on five-point scales measuring sense of happiness adapted from a questionnaire on youth spirituality and community participation (Mason, Singleton & Weber, 2007).
- *Section 5:* This final section asked respondents to provide basic demographic details such as age, gender, education level, cultural identity, area of residence and household income.

3.0 Findings

The following section presents the survey findings. First we present the demographic characteristics of the sample, incorporating comparisons with a number of demographic indicators based on Victorian and Australian population samples. Next we present the main themes that emerged from the open-ended questions that focused on the experience of singing in a group. Following on from that we discuss the findings for social support and community participation measures; and finally we examine the findings for health and wellbeing measures.

3.1 Key characteristics of the survey sample (N = 220)

Previous studies examining the health and wellbeing benefits of singing in groups have reported particular demographic profiles for singing group members. The commonly reported demographic characteristics of singing group members include: that they are well educated and have relatively high incomes; that they tend to be predominantly white or of Anglo-European backgrounds with little cultural diversity; and that they are typically from older age groups (Clift et al., 2010; Chorus America, 2003; 2009; Stacy, Brittain, & Kerr, 2002; Bohan, 2005). Previous studies also report a greater representation of women compared with men in singing groups, and that they are more likely to reside in suburban or urban areas than in rural areas (Chorus America, 2003, 2009; Clift et. al., 2010; Stacy et. al., 2002; Clift & Hancox, 2001).

The key demographic characteristics relating to age, sex, area of residence, income, ethnicity and time spent singing with the group were obtained for our survey sample:

Sex

Just under half the sample (49%) were male and 51% were female, consistent with gender ratio in the Victorian population (ABS, 2006). This is a substantially higher proportion of male participants compared to other studies such as Clift et. al. (2010), who reported 77% female participants versus 23% male participants in singing groups.

Age

The mean age for the sample was 51 years (sd= 12.4). Ages ranged between 17 and 75 years. In Clift et al.'s 2010 sample, the mean age was 61 (although one participating group was a seniors choir).

Income

The largest group of respondents (40%) indicated their annual income was \$75,000 or over, with 38% earning below \$50,000 a year. The main source of income for about 50% of the sample was wages and salary followed by 18% who were retired and/or living on pensions. In comparison with the Victorian population, the majority of the singing group sample earned above the approximate Victorian median household annual income (\$53,144). However, the Victorian sample encompasses a working-aged population from 15 to 64, with income being reported in three categories: median individual weekly income, household weekly income and family income. As a result it is difficult to make a direct comparison regarding income between the Victorian population and our survey sample which had a wider age range and where income was reported as within a certain range only, but it is clearly a more affluent sample overall.

Table 1 (see following) presents a comparison between the singing group sample, the Victorian Population Health Survey findings and the National Aboriginal and Torres Strait Islander Health Survey 2004–05 (ABS, 2006) on the question “If you had to get \$2000 for something important could the money be obtained within a week?”. It further illustrates the socio-economic status of singing group members as a financially well supported group. There was no significant difference between the Victorian Population Health Survey findings and the singing group sample for the proportion answering ‘Yes’ (p=.05). However the survey respondents and the Victorian population appeared to be much less disadvantaged than the Indigenous population.

Table 1: Perceived ability to access funds at short notice in a time of crisis.

“If you had to get \$2000 for something important could the money be obtained within a week?”	Singing group sample	Victorian Population Health Survey 2007	National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) 2004–05
Proportion answering ‘Yes’	91%	87%	46%

Ethnicity

The sample does not reflect the ethnic diversity of the Victorian population, as most survey respondents (82%) were Australian-born compared with 70% of the Victorian population, and 91% reported that they spoke only English at home compared with 74% of the Victorian population (ABS, 2006). It is not clear whether these discrepancies reflect patterns in singing group membership overall, or in survey response patterns; nevertheless they are consistent with findings from previous studies indicating that those who participate in choirs differ in socially significant ways from the general population (Bell, 2004; Chorus America 2003, 2009). Despite this apparent monocultural bias, a number of respondents did make mention of cultural reasons for their choice of group: “to connect with my heritage after father died”; “to tell stories and experiences of being a migrant”; “connection with the French language” (singing in Italian and African languages was also mentioned).

Area of residence

- A much greater proportion of our respondents lived in rural areas compared to other studies such as the Chorus America study (2003), which reported that only 10% of their sample resided in rural areas. The majority of our respondents (75%) described themselves as living in suburban/urban areas, while 25% said they lived in rural areas, as compared with 72:28 for the Melbourne/outside Melbourne residency percentages for the Victorian population. However closer examination of postcode distributions revealed that an ‘urban/suburban’ response could indicate residence in a regional city such as Geelong or Bendigo, rather than Melbourne as

we initially assumed. Postcode analysis revealed that only 121 respondents (55%) actually listed greater Melbourne LGA postcodes.

- The postcode spread by local government area (LGA) within Melbourne indicated that the largest cluster of participants (11 = 9% of the Melbourne sample) came from one relatively affluent area, Boroondara, which has only 4.5% of Melbourne's population (so twice as many as would be expected). Only 8% (7 respondents) resided in the less affluent 6 western suburbs LGAs combined, which make up 18% of Melbourne's population (only half as many as would be expected), so that area is significantly under-represented.

These characteristics indicate overall that the sample differed in a number of ways from the Victorian population profile taken from Australian Bureau of Statistics (ABS) 2006 census data. As commonly reported in singing group research, respondents tended to be older, more affluent, and less culturally or linguistically diverse than the general population, but the sample here was much more reflective of the gender and rural/urban mix than has been the case in previous studies.

3.2 The meaning of singing in a group – “The sense of wellbeing experienced as we create beautiful music together”

For the majority of people who sing in groups its importance cannot be underestimated. Our study sought to capture some of the passion of singing in a group, including singing group members' perceptions of what it means for their health and wellbeing. Three main themes emerged from two open-ended questions enquiring into people's reasons for singing in a group and the motivations that drew them to sing with their current group:

1. singing and music
2. social connection
3. health and wellbeing.

3.2.1 Singing and music – “For the love of singing”

Most survey respondents wrote about qualities of singing and music as the main reason for singing in a group. Some saw singing in groups as purely a part of their musical interest and as a personal challenge to expand on their vocal and musical skills, including their singing

repertoire. Interestingly these respondents often made it clear that due to their musical interest they had joined a more structured choir rather than a community singing group or 'vocal nosh'. A few reported that they were motivated to join their singing group primarily because of its reputation as a choir. Others stated their preference for a group that was less formal, one that was a "community group and musically accessible": "it is local, casual, there is no regular commitment"; "the fact that it is a Vocal Nosh (not a choir) and that we just Sing for Fun".

Such choices were not always mutually exclusive: "I sing in five groups. Each has a particular style and repertoire from folk music to opera so I can indulge in many forms of music within the discipline of singing." Many simply stated that they liked or loved singing and music-making, with comments like: "The joy of creating vibrant harmonies", "Love of choral music and the challenges of singing".

And why group singing?

"Enjoyment of singing, especially being in the middle of the sound. Not interested in individual singing."

"The sound we make is much more amazing than the sound I can make on my own!"

3.2.2 Social connection – "The wonderful 'feeling' of singing in a group"

To many respondents who commented on the importance of singing as being part of a collective experience, singing and music were not necessarily secondary to the social aspect, but a product of teamwork and people coming together to share their love of singing. "I love singing, I love performing and enjoy being part of a team", "To be in a group who love to make music".

Some respondents indicated that singing was part of a broader view of connecting with their community and sharing something with the community at large. This was also given as a reason for joining their current singing group, with many also naming particular people in the group as a reason for joining. "A sense of belonging – great community feeling", "I had friends in the group and they sing the music I like to sing".

3.2.3 Health and wellbeing – “Exercise for body and mind”

Health and wellbeing was given as a reason for singing in a group by a number of respondents, along with a love of singing and music. Most commented on the general enjoyment they experienced from singing, which some explained as a feeling of wellbeing at a personal level. Some also spoke about specific health and wellbeing benefits they enjoyed from singing, such as relaxation and as an outlet for reducing stress: “Singing makes me feel good, physically and emotionally”; “Enjoyment, relaxation and something else to think about other than study”.

Some respondents made special mention of singing being beneficial to their emotional wellbeing and mental health. A few drew connections with a collective sense of wellbeing to which singing group members contributed. Others saw singing as an important way of expressing their social identity: “Because it is something that defines me as an individual not as a wife or mother”; “The medium of singing is unique and has its own language – it is not like anything else I can share in my community.”

3.3 Singing for social support and community participation – “The genuine sincere people reaching out to create harmony in a diverse community”

The survey contained similar questions rated on a five-point scale examining the areas of social support and community participation in relation to group singing to those used in the Chorus America studies (2003; 2009). A sample question was: “I socialise with fellow members of the group outside rehearsals and performances”.

3.3.1 Singing and community participation – “It's local, known for its social activism and community engagement”

The following findings relate to participation in the community. Overall the findings show that as a group, community singers share a strong belief in the value of group singing for themselves, their groups and local communities.

- 77% of respondents stated that they sang with their group once a week.
- The average length of membership with their current singing group was 5½ years. Length of membership ranged from less than a month to 50 years.

- 47% of respondents travel less than 15 minutes to their group singing sessions, with only a small number (9%) travelling more than 45 minutes to attend.
- 66% agreed or strongly agreed that they socialise with members outside their group singing sessions.
- 45% agreed or strongly agreed that they are more involved in community activities since joining their singing group, while 30% of respondents gave a neutral rating to this question; 36% of respondents agreed or strongly agreed that they were more involved in social action since joining their singing group, while 40% gave a neutral rating. (Interpreting this high 'neutral' finding requires some care. It may suggest that people were already involved in community activities on joining their singing group, or it may mean that they were not involved in community activities and are still not involved.)
- 85% of respondents agreed or strongly agreed that they had a responsibility to contribute to their own community.
- 77% agreed or strongly agreed that they had a responsibility to contribute to communities beyond their own community.

An interesting gender difference emerged here, with significantly more men than women agreeing they had a responsibility to contribute beyond their own community ($p < .046$). This could indicate that men may have either more time or greater inclination to become involved with issues that do not directly affect them or their family. This finding may also be connected to the meaningful family and other relationships that exist for women within their local community.

3.3.2 Singing and social support

“I know a member who kept missing classes because of no transport. I could help her and myself as well.”

This section presents the findings for the level of social support experienced by singing group members in their respective communities. Social support was examined by asking respondents about the kinds of support they gave to others as well as the support they had received within the last month. Respondents were asked to select from a set of seven categories listing groups of people that they may have supported or from whom they may have received support. A sample question was: “If you needed to, could you ask someone

(who does not live with you) for any of these types of support in time of crisis?" The findings for social support are found below.

3.3.3 Supporting others

- The majority of the sample (74%) had helped a friend over the month prior to completing the survey, followed by relatives (52%).
- The majority (74%) of respondents had helped others by giving them emotional support, followed by transport (47%).

3.3.4 Receiving and seeking support

Overall, the majority of respondents indicated that they had received some kind of support over the past month, with only 20% stating that they had not received any type of support. All respondents felt they could also ask for support in a time of crisis.

- The majority of respondents (71%) had received support from a friend, with 63% indicating they had received emotional support followed by some other unspecified support (30%) and then support with transport (24%).
- In a crisis most respondents could ask for emotional support (95%) followed by support for illness (87%).

Again the majority of the sample (90%) felt they could ask a friend for help in a crisis, followed by asking family (87%). A comparison of these findings with similar social support survey data from the National General Social Survey (2006) and Victorian Population Health Survey (2007) revealed that people in singing groups are significantly more inclined to seek support in times of crisis from friends and family but are less likely than other Victorians to receive support from their neighbours ($p < .05$) (See Table 2).

Table 2: Primary sources of support in a crisis between the Singing Group sample, National General Social Survey and the Victorian Population Health Survey samples.

Could ask the following for help in a crisis:	Singing group sample %	National General Social Survey Sample (2006) %	Victorian Population Health Survey Sample (2007) %
Friends	90	67	80
Family	87	80	81
Neighbours	38	40	48

The singing group sample also reported that they would ask for support from work colleagues and various community, government and professional organisations in a crisis, with a minority (26%) reporting that they would approach a government agency for support. However, in comparison to the National ABS sample (2006), singing group members were more likely to seek help from a government agency, although a statistical comparison was not possible as only an approximate range was reported by the ABS sample (<20%).

These findings suggest that singing in groups might encourage support seeking from various sources such that members are well supported in times of crisis. The findings might also suggest that singing group members may be better placed to reciprocate support in view of their relatively stronger economic circumstances, and they may also possess the social skills and knowledge needed for support seeking. Belonging to a singing group (or any other community group) might also facilitate information exchange for various resources and sources of support such as that from government agencies.

In summary there does appear to be greater social support available to those who sing in groups from friends and family compared with what is available to the average Australian, based on the National General Social Survey findings (ABS, 2006). A similar general finding was also found for those who sing in groups when compared to the average Victorian based on the Victorian Population Health Survey findings (DHS, 2008). However, there appears to be less support expected from neighbours for the singing group sample compared with the average Victorian or Australian, perhaps due to their stronger friendship networks beyond their immediate neighbours, with some respondents joining singing groups in their workplace or university. Although the survey did not ask respondents to specify the amount of support they received or were able to receive from singing group members, the majority of respondents (82%) did indicate that they had formed new friendships with other members of their singing group. It is reasonable then to suppose that respondents would

have received some support from their friendships within their singing groups in times of need, and some made comments to this effect: “the commitment to those who join the group shows concern for each other’s wellbeing by a few retired people who ring to chat if you don’t turn up. It feels great they care whether you are well.”

3.4 Singing for health and wellbeing – “It is the greatest fun, gives me enormous enjoyment and makes me feel good”

This section of the survey was dedicated to health and wellbeing measures. The questions were based on the Personal Wellbeing Index (PWI) developed by Professor Robert Cummins at Deakin University. Three questions in the survey serve as global measures of health and wellbeing: life satisfaction, physical health and mental health. The two global measures of physical and mental health do not form part of the standard PWI. They have been included to compare other measures of wellbeing in the survey to global measures of both physical and psychological health. The Personal Wellbeing Index includes its own global wellbeing question that is used for comparison with specific domains of wellbeing: “How satisfied are you with your life as a whole?”

The remaining questions measured key domains of Personal Wellbeing (International Wellbeing Group, 2006): standard of living, health, achieving in life, relationships, safety, community connectedness, future security, social support and spirituality/religion. An example of an indicator of wellbeing question is “How satisfied are you with how safe you feel?” The domain of social support is not part of the usual PWI domains but was added to compare ratings with other indicators of wellbeing. Indicators of wellbeing are measured in the survey by using a 10-point rating scale of respondents’ level of satisfaction within each key domain.

The survey included an additional set of indicators for wellbeing. A final set of questions specifically asked respondents to rate the importance of eight activities, including singing in a group, to their sense of peace and happiness. The main findings for questions relating to the health and wellbeing domains in the survey are found below.

3.4.1 Global measures of health and wellbeing

The mean ratings for the sample were 3.6 for physical health and 3.8 for psychological health, with 1 being extremely poor to 5 being excellent. Overall, the majority of the sample

rated their physical health (87%) and their psychological health (92%) as good, very good, or excellent.

3.4.2 Indicator measures of wellbeing

The satisfaction ratings for the sample have been converted to a Standardised Personal Wellbeing Index (PWI) score (International Wellbeing Group, 2008). The PWI scores for the sample are here compared with standardised normative scores gained from a national survey conducted by the International Wellbeing Group based at Deakin University (2008). Significant differences between the two groups are examined in Table 3.

Table 3: Personal Wellbeing Index standardised scores for singing group sample and Australian normative sample for all domains.

		Singing group sample		PWI Normative Sample (International Wellbeing Group, 2008)		
N		220		25,599		
Personal wellbeing Index domains	Standardised PWI Mean score	Standardised PWI SD	Normative Mean PWI score	Normative PWI SD	Single sample tests $p=.$	
Satisfied with life as a whole	74.8	18.0	77.6	17.4	.024	
Satisfied with how safe you feel	83.6	16.3	77.6	18.4	.000	
Satisfied with standard of living	81.5	17.3	75.0	12.2	.000	
Satisfied with health	70.1	21.3	75.1	19.9	.001	
Satisfied with what you are achieving	73.7	17.6	74.2	17.8	.643	
Satisfied with relationships	74.2	19.4	79.8	20.5	.000	
Satisfied with feeling part of community	75.8	17.1	70.5	20.1	.000	
Satisfied with future security	73.9	18.3	70.5	19.7	.007	
Satisfied with religion and spirituality	74.5	19.1	N/A	N/A	N/A	
Satisfied with social support	75.0	17.9	N/A	N/A	N/A	

The findings for the survey sample in comparison to the PWI normative sample for satisfaction with health and wellbeing are mixed. The mean global life satisfaction score for the singing group sample is significantly lower than the Australian normative sample. Possible reasons for this lower level of life satisfaction may be found in the specific domains explored in the PWI. In particular the singing group members had relatively lower levels of satisfaction with their health and their relationships.

The singers' lower level of satisfaction with health could indicate that group singing is not as directly beneficial to health as might be expected from the literature. It could also reflect the age profile of the singing group sample, with health-related indicators likely to show some deterioration with age. Respondents' lower satisfaction with relationships could be interpreted to mean that although singing group members increase their social networks and resources by singing in groups, the quality of these relationships are not as deep or meaningful as desired. It may also be that singing group members are referring to other meaningful relationships not connected to their singing groups that may be of greater salience, such as their relationships with a partner and/or family members.

By contrast the survey respondents were significantly more likely than the normative sample to be satisfied with their standard of living and how safe they feel. This high satisfaction with standard of living could reflect the relative affluence of the singing group sample, or perhaps less reliance on material wealth and consumption as a source of wellbeing. The high satisfaction with feeling safe could be due to the survey respondents' expanded social networks providing greater access to help and resources when needed. It may also be due to a more positive perception of their local community stemming from their singing group involvement.

The level of satisfaction with spirituality and religion as well as social support could not be compared to a normative sample. However on comparison with their global life score and other wellbeing and social support ratings, it is likely that survey respondents also rated these aspects of their wellbeing relatively highly.

The only other study to use a measure of dimensions of wellbeing was that by Clift et. al. (2010) who also found that the majority of their singing group sample indicated good to excellent psychological wellbeing, with women more likely to attribute greater psychological wellbeing to singing than did men. They also found high mean scores on domains of physical, social and environmental wellbeing. The findings for satisfaction with health and wellbeing for our sample appear to be broadly consistent with the study by Clift et al. (2010). However

they are not strictly comparable because their study used a different measure of wellbeing, the WHOQOL-BREF.

3.4.3 Perceived sense of peace and happiness – “...it feeds my soul and gives me pleasure”

Questions relating to participants’ perceived sense of peace and happiness were adapted from The Spirit of Generation Y project (2003–2007), a national survey of spirituality among Australian young people (Mason, Singleton, & Weber, 2007). Respondents rated the importance of eight activities – see Table 4.

Table 4: Highest and lowest item ratings for perceived importance to singing group respondents’ sense of peace and happiness.

Perceived importance to your sense of peace and happiness	Mean	SD
Singing	4.55	0.62
Listening to music	4.54	0.68
Nature	4.34	0.88
Work	3.92	0.96
Creative	3.74	1.20
Meditation	3.11	1.39
Shopping	2.38	1.23
Alcohol and drugs	2.05	1.21

As expected, music and singing were reported as major contributors to singing group members’ sense of peace and happiness. The least important activities were shopping, drinking alcohol or taking recreational drugs, which may be due to the skewed age distribution of the sample; it could also reflect a social desirability response. The least important activity rated by the Generation Y sample was meditation, which was also low for the singing group sample. As The Spirit of Generation Y project was specific to young people in their teens and 20s, their sample is not comparable with the present group. However, listening to music was also the activity rated most important for enjoying peace and happiness by those young people. Conversely, work or study, which was important for the

Generation Y respondents, was not rated as highly by the singing group sample, perhaps also because of life stage differences.

In summary, our survey respondents reported being highly satisfied with their standard of living, future security, level of safety and feeling part of their community; they rated non-material pleasures such as music, singing and nature more highly than activities like work or shopping, but their overall satisfaction with life, their health and relationships was lower than might be expected. While their relative affluence is likely to be an overarching contributor to most of these aspects of their wellbeing, it is feasible to consider that their involvement in communal singing is an influence on their sense of safety and inclusion within their community. At the very least, it seems that poor health and increasing age do not represent the barriers to participation in a singing group that might be the case with sporting and other activities. “I have a lifelong love and involvement in music, singing, playing the piano, guitar, violin. Especially singing, now in my later years”; “Stress relief...doing something physical that brings me joy instead of pain...(i.e., the gym!)”

4.0 Discussion and conclusions

“The fun of learning, joining in with a group of local people, making a good sound and so making the effort very well worthwhile.”

“I LOVE singing and I’ve made some very close friendships in the choir. When you’re doing something you’re passionate about it’s good for your physical and emotional wellbeing.”

As a form of mental health promotion at the universal level, communal singing might foster behaviours known to increase social and emotional wellbeing and lessen the likelihood of mental ill-health occurring, such as friendship-making and sense of belonging (Gridley, 2008); as selective health promotion, a singing group might aim to increase social inclusion and vitality for marginalised groups such as people with disabilities or isolated single mothers (Riley & Gridley, unpublished); indicated mental health promotion might aim to reduce the stigma associated with mental illness and increase social acceptance and inclusion for people experiencing mental health problems. In Melbourne, the Choir of Hard Knocks was featured in a 2007 ABC documentary, with just such an aim in mind. But for the people themselves who join singing groups, whether informal ‘Vocal Nosh’ gatherings, local community choirs or formal performing chorales, the words commonly used to capture the experience of singing together are ‘joy’, ‘fun’, ‘pleasure’ – and most often, ‘love of singing’.

The aim of the VicHealth-funded project presented here was to explore the mental and social health benefits of singing in groups for both the individual singers and for the community. Our survey attempted to address the main gaps identified by the literature and in particular, to gather information on singing-related mental health and wellbeing at the individual level (social connectedness, social support) and at the community level (social capital, civic and community engagement).

Four research questions guided the exploration of the potential relationships between singing in groups and social support, mental wellbeing and involvement in social action and civic engagement, and each is examined here in the light of the findings.

1. How do participants describe their own experience of singing in groups?

Three main themes emerged from two open-ended questions enquiring into people's reasons for singing in a group and the motivations that drew them to sing with their current group:

- Singing and music – the sheer love of singing was the most frequently cited reason for joining a group.
- Social connection – the social aspect was equally important to many respondents who wrote about “making a connection with others through song”.
- Health and wellbeing – words like ‘therapeutic’, ‘healing’, ‘physically relaxing’ and ‘letting off steam’ were used repeatedly.

Many cited reasons that resonated with all three of these themes: “singing in harmony with others nourishes the soul and spirit”.

2. Does singing in groups increase experiences of social support?

There does appear to be greater social support available to those who sing in groups from friends and family compared with what is available to the average Victorian or Australian. However, there appears to be less support expected from neighbours for the singing group sample, perhaps due to their stronger friendship networks beyond their immediate neighbours. Although the survey did not ask respondents to specify the amount of support they received or were able to receive from singing group members, the majority of

respondents did indicate that they had formed new friendships with other members of their singing group. It is reasonable then to suppose that respondents would have received some support from their friendships within their singing groups in times of need.

3. Do singing group members report greater levels of wellbeing, perceived happiness and health than the general population?

The findings for the survey sample in comparison to the PWI normative sample for satisfaction with health and wellbeing are mixed. Overall, the majority of the sample rated their physical health (87%) and their psychological health (92%) as good, very good, or excellent. But the mean global life satisfaction score for the singing group sample is significantly lower than for the Australian normative sample. Possible reasons for this lower level of life satisfaction may be found in the specific domains explored in the PWI. In particular the singing group members had relatively lower levels of satisfaction with their health and relationships. As expected, music and singing were reported as major contributors to singing group members' sense of peace and happiness.

By contrast the survey respondents were significantly more likely than the normative sample to be satisfied with their standard of living and how safe they feel. This high satisfaction with standard of living could reflect the relative affluence of the singing group sample, or perhaps less reliance on material wealth and consumption as a source of wellbeing. The high satisfaction with feeling safe could be due to the survey respondents' expanded social networks providing greater access to help and resources when needed. It may also be due to a more positive perception of their local community stemming from their singing group involvement.

4. Do singing group members report increased levels of social action and volunteering since joining their group?

Although survey respondents reported being highly involved in their communities in a number of ways – volunteering, giving and receiving support, and acknowledging responsibilities to contribute within and beyond their local domain – it is not possible to tell how much their singing group involvement enhanced the likelihood of their participation elsewhere. O'Connor's unpublished case study (2009) of one Melbourne community choir found that volunteer community work was being undertaken by 77% of respondents.

Similarly, the Chorus Impact Research conducted by Chorus America (2003) reported a positive correlation between participation in choral singing and the level of community involvement, but could not determine whether this was a result of their participation in the choruses, or whether they had already been actively involved in their community and were 'joiners' by nature. Close to half of our respondents reporting being more involved in community activities since joining their group, but the remaining responses were somewhat ambiguous on this question.

Again, the qualitative data is helpful in shedding light on at least some participants' involvement in community and social action, with many linking this with their singing group commitment. For some, their choice of choir was connected to their values and politics: "It has an environmental theme and that is what interests and motivates me"; "It is embedded in my local community, it is an all women group and it sings songs with an explicit or implicit political message"; "It's local, known for its social activism and community engagement". For others, the opportunity to contribute to their community was one of their primary reasons for singing: "To sing for other people be it in nursing homes, citizenship ceremonies, Christmas carols, choir concerts"; "the mix of music and cultures, create harmony in community".

4.1 What has been achieved here?

As commonly reported in singing group research, respondents tended to be older, more affluent, and less culturally or linguistically diverse than the general population, but were much more reflective of the gender and rural/urban mix than has been the case in previous studies. Melbourne residents were actually significantly under-represented in our sample, probably because two major distribution points for the survey were statewide events held in regional Victoria. Or perhaps Community Music Victoria has indeed been successful in promoting the notion that 'Victoria Sings'!

Within Melbourne, the western suburbs were significantly under-represented. We think this imbalance might reflect actual participation (and opportunities to participate) in singing groups across the metropolitan area, rather than a sampling problem, although we were not aiming for a representative sample. A forthcoming study by Riley and Gridley (unpublished) will consider the perspectives of particular groups that are under-represented in this and other singing group research.

Our original intention was to employ a repeated measures design to monitor any changes in participants' responses at least six months later, particularly for those who had only recently joined (or were still waiting to join) their singing group. However, the average length of membership with their current singing group was 5½ years, with many noting that they had belonged to other groups before or parallel to joining their current group; as one respondent commented "I wanted to continue singing after arriving here from the US where I sang in a choir for 20 years". So measuring singing-related changes in health, wellbeing, social support community participation proved difficult in these real-life contexts.

The jury remains out on the most appropriate ways of capturing and measuring indicators of community wellbeing as potential outcomes of arts activities. Most of the available research on singing, health and wellbeing is based on self-report surveys or testimonials. The study of the health benefits of singing is a developing area and not all currently available literature meets evidence-based standards according to a recent systematic review by Clift, Hancox, Staricoff and Whitmore (2008). VicHealth is concerned with implementing academically rigorous research methods to improve the knowledge base about the benefits of community-based singing programs. Yet the challenge of doing so in real-world community contexts remains.

However, while methodological problems exist with a number of studies (Astbury, Gridley & Sharples, in press), the weight of findings in the available evidence base does suggest that group singing is a powerful personal and social health promotion activity. Findings on the improved social as well as personal dimensions of emotional health and wellbeing that are associated with singing in groups are strong and consistent. Numerous studies utilising different research designs and methodological approaches have reported the following benefits of singing in groups:

- increased self-confidence, empowerment, wellbeing and interpersonal skills
- a general lifting of the spirits and a sense of joy and accomplishment
- lowered feelings of social isolation, depression and anxiety
- increased social capital through participation in social, cultural and community activities
- denser social and friendship networks.

The findings of the current study of 220 singing group participants lend weight to all of these points.

Further research on community singing could follow up the findings reported by previous studies in this area where the findings are open to question. For example, the testimonial nature of much self-report and interview-based research does not leave much room for those whose experience of singing groups has been an unhappy one, particularly if they have dropped out as a result. O'Connor's (2009) comprehensive case study of one community choir does note some negative aspects "when conflict and disharmony were experienced between choir members, and when organisational needs and processes placed too much demand on other parts of people's lives" (p.11). Identifying negative cases could assist in pinpointing what makes an arts program or community group successful and sustainable.

It may also be the case that 'singing is not for everyone', despite the enthusiasm of its passionate proponents. But it is unlikely that the popularity and proliferation of community choirs has reached saturation point just yet, and there is plenty of evidence to support the efforts of groups like Community Music Victoria in ensuring that as many Victorians as possible continue to have the opportunity to vote with their voices.

"I love the feeling I get when singing with others – but especially when the sound we make is much more amazing than the sound I can make on my own!"

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Singing and health: Literature review

Background and purpose

Positive notions of health, including mental health and emotional wellbeing, stress the need for a comprehensive understanding of all the factors that promote and sustain wellbeing. Ever since the World Health Organization (1948) explicitly refuted the idea that health is synonymous with ‘the absence of disease or infirmity’, health professionals and researchers have sought to identify the bio-psychosocial determinants of optimal health. WHO’s 1948 definition framed health as ‘a state of complete physical, mental and social wellbeing’, while the Ottawa Charter for Health Promotion (1986) viewed health as a ‘positive concept emphasising social and personal resources, as well as physical capacities’. Importantly, both acknowledged the social dimensions of health. The Ottawa Charter delineated the role of health promotion as one of assisting people to increase control over the determinants of their health.

More recently, VicHealth (1999) articulated a definition of mental health that encompassed vitality, active living, and the achievement of goals and emphasised the importance of interactions between people:

Mental health is the embodiment of social, emotional and spiritual wellbeing. Mental health provides individuals with the vitality necessary for active living, to achieve goals and to interact with one another in ways that are respectful and just (VicHealth, 1999).

The characteristics of interactions between people that are singled out as significant for health are being respectful and just. In its *Mental Health Promotion Framework 2005–2007*, VicHealth identifies three critical determinants of mental health and emotional wellbeing, namely social inclusion, freedom from discrimination and violence, and access to economic resources.

The Framework also focuses on the settings in which mental health promotion can usefully take place. One of these settings is the arts. A National Endowment for the Arts (NEA) study in the United States revealed that singing in some form of vocal group was the most popular public arts activity and far outstripped other arts activities including drama, dance, painting and drawing (NEA, 1998).

The current review of the research literature seeks to document the available evidence on the health, especially the mental health, benefits of singing, informed by a broad bio-psychosocial definition of mental health. It is important to document the health benefits of

singing in a scientifically rigorous manner. As Hunter (1999) observed, the long history of anecdotal evidence supporting the idea that singing is good for you contrasts sharply with the dearth of evidence-based research.

The review is divided into three sections. First, we explore the research literature that focuses on the physical health benefits of singing. Second, we examine its psychological benefits. Both these sections focus on benefits that accrue to the individual as a result of singing. The third section presents evidence on the beneficial health effects that are mediated through singing in groups.

Range of studies

The claim that singing is good for one's health has now been widely examined in a range of studies which vary considerably with regard to the quality of their research designs and methodological rigour. Various research designs have been applied in the area of health and psychological research to study the link between singing and health, such as using self-report questionnaires, interviews, case studies, observational and experimental methods.

Selection bias is a common feature of many studies. As the Chorus America study (2003) revealed, those who choose to participate in singing differ from the general population in a number of ways. Those participating in choirs are more likely to be white, female, older and better educated than the background population (Hillman, 2002; Bell, 2004; Cohen, Perlstein, Chapline, Kelly, Firth & Simmens, 2006; Clift, Hancox, Morrison, Hess, Kreutz & Stewart, 2007). Whether it is feasible and acceptable to randomly assign participants to an intervention involving singing regardless of their desire to do so, and to compare them with participants in a control group who receive neither singing nor any other arts activity, is an empirical question that needs to be investigated.

Research into the reasons people join choirs suggests that it might be difficult to recruit sufficient people to conduct a randomised controlled trial in this area. For example, Holmquist's (1995) study of the shared characteristics of adult community choir members found that members shared a number of characteristics such as having an insider language, a sense of musical community, memory of a peak musical moment and a recognition and desire for effective music teachers. However, the overarching characteristic that dominated all others was that: 'These subjects love music. If they didn't, they would not be actively participating now' (p.149).

Similarly, the top three reasons for belonging to community choirs in a study conducted in Kentucky in the United States were described as the 'love of singing', 'to enjoy beauty of music' and 'personal enjoyment' (Vincent, 1997). The 2003 Chorus America survey also found that 'the music' was the primary reason given by adults for joining a chorus (Chorus America, 2003). If enjoyment and love of music and singing catalyse the health benefits associated with music, then those who do not love music may not gain those benefits even if they are persuaded to participate in a chorus or a trial using a music intervention.

Studies reviewed here have employed diverse samples and been informed by both qualitative and quantitative methodologies. Some studies utilise self-reported changes in individual wellbeing associated with singing (Stacy, Brittain, & Kerr, 2002; Clift et al., 2007) while others assess wellbeing before and after a singing intervention using validated, psychometrically sound measures that permit stronger claims to be made about the causal role of singing in emotional wellbeing (Houston, McKee, Carroll & Marsh, 1998).

Research studies can be divided into two broad groups, those that investigate the physical/physiological effects of singing and those that are interested in the psychological/therapeutic effects of singing. Researchers in both areas are interested not only in identifying the health impacts of singing but in explaining the processes and mechanisms through which those health impacts are transmitted. However, it must be said that most of the research about singing and its effects on health and wellbeing is dedicated to the ways singing affects and benefits individuals rather than groups or communities.

1. Individual benefits

Physical benefits

Some studies speculate that the physical health impacts of singing are mediated through the physical activities involved in singing, such as breathing exercises and voice control. These activities can positively affect breathing capacity, muscle tension, and posture, and reduce respiratory symptoms (Aldridge, 1991; Clift & Hancox, 2001; Grape, Sandgren, Hansson, Ericson & Theorell, 2003; Kreutz, Bongard, Rohrmann, Hodapp, & Grebe, 2004).

Studies that examine the physical efforts expended by professional musicians and singers (Bailey & Davidson, 2005) argue that specific techniques used by professionals to improve their performance require them to exert physical effort and result in improved physical fitness (Bailey & Davidson, 2005; Grape et al., 2003). However, non-professional singers have

also reported improvements in their physical fitness. For instance, participants in Hillman's (2002) study of the effects of participation in a singing group on the lives of older people reported improvements in their ability to control their breathing during other daily exercise such as walking. The same physically beneficial effects have been reproduced in populations with respiratory difficulties such as asthma sufferers (Wade, 2002). Bernardi et al. (2001) found that music-making that involves making vocal sounds at a consistent pace (e.g., chanting) slowed respiration sufficiently to have a positive effect on cardiovascular rhythms. That is, singing caused participants to control their breathing and this influenced (slowed and regulated) their heart rate, and improved blood flow around the body, including to the brain. Non-professional musicians have also identified less quantifiable benefits for their physical health as a result of making music. Singers have reported a significant reduction in, or amelioration of, general bodily aches and pains whilst they participate in singing (Bailey & Davidson, 2005; Hillman, 2002).

Another group of studies on the effects of participation in music has focused on the changes participation produces in stress-moderating hormones. Such studies demonstrate how the positive physical health impacts of singing are mediated through the changes they make to the body's immune system via the release of hormones involved in the modulation of stress and wellbeing. For example, singing can cause an increase in the secretion of immunoglobulin A and decrease cortisol levels (Beck, Cesario, Yousefi & Enamoto, 2000; Kreutz, Bongard, Rohrmann, Grebe, et al., 2003; Kreutz et al., 2004). Immunoglobulin A (IgA) is a substance released by the immune system that is associated with positive or relaxing experiences, while cortisol is a hormone linked with emotional stress (Kreutz, et al., 2004). Another study found that patients with Alzheimer's disease had increased levels of melatonin after involvement in music therapy (Kumar, Tims, Cruess, Mintzer et al., 1999). Similarly, Grape et al. (2003) found that post-singing session levels of cortisol were higher for professional singers than for amateurs. This result is not surprising, given that professionals focus much more on the kinetic aspects of singing (e.g., posture, vocalisation) and technique than amateurs. Despite this difference, oxytocin, a hormone known to induce feelings of wellbeing, increased for all participants following a singing session. Participants also rated their subjective emotional state (1 = most negative to 10 = most positive) both before and after singing on a scale composed of five bi-polar emotional states namely: sad-joyful; anxious-calm; worried-elated; listless-energetic; and tense-relaxed. Significant positive changes were observed with all participants indicating improvements in mood and energy following the singing session.

Additional evidence from the neurophysiological literature suggests that music-making functions are 'food for the brain'. A large portion of research on this concept comes from studies on the so-called 'Mozart effect'. This term arose from an experiment on the effects of exposure to music by Mozart on the spatial abilities of undergraduate students (Rauscher, Shaw, & Ky, 1995). Listening to Mozart was found to have a temporary (10 to 15 minutes) positive influence on students' performance on a spatial test. Subsequent research has indicated that this increase in performance is not confined to the works of Mozart, but also comes from the arousal effects of the music. Compositional features that imbue music with a positive, happy or uplifting sound appear to stimulate alertness and a greater ability to concentrate in a range of populations (Frank, 2003; Husain, Thompson, & Schellenberg, 2002; Thompson, Schellenberg, & Husain, 2001). Participants' familiarity with the music provided to them and their liking for a particular piece also produce similar effects (Schellenberg & Hallam, 2005). However, the so-called Mozart effect has been challenged by Chabris (1999) who conducted a meta-analysis of 16 studies and concluded that any cognitive enhancement due to the Mozart effect was small and did not reflect any change in IQ or reasoning ability. Chabris' conclusions have been echoed by others (Bridgett & Cuevas, 2000).

Psychological benefits

Evidence on the physical and neuro-physiological benefits of effects of music is supplemented by a substantial body of literature on the psychological/therapeutic benefits of music and singing. Helping people gain positive mood is one example of the emotional benefits commonly associated with singing, whether it is among the general population (Clift & Hancox, 2001; Valentine & Evans, 2001) or among individuals with special needs like patients with chronic pain (Kenny & Faunce, 2004). Consequently, many studies focus on the relationship between participation in singing and positive mood state changes. In clinical populations, music therapy, in which singing is commonly used as a therapeutic technique, is a well established branch of psychotherapy (see for example Bunt, 1994; Even, 2001; Smith & Patey, 2003). The popularity of music therapy is indicated by the range of specialist academic journals in this area, such as the *Nordic Journal of Music Therapy*, *British Journal of Music Therapy*, *Journal of Music Therapy* (from America), and *Australian Journal of Music Therapy*. In the area of music therapy, however, singing is generally studied in combination with other musical techniques, like listening to music or playing music instruments. Studies

that consider singing independently are less common and have primarily explored the use of music to induce positive emotional states in clinical populations.

In the field of music therapy, singing combined with other therapeutic techniques has been shown to assist the recovery process of various psychological and physiological health problems across different age groups, such as helping infants and toddlers with Cystic Fibrosis feel more comfortable during chest physiotherapy (Grasso, Button, Allison & Sawyer 2000); reducing anxiety and increasing the comfort of patients experiencing mood disturbance during hospitalisation (Cassileth, Vickers, & Magill, 2003), including children hospitalised with cancer (Barrera, Rykov & Doyle, 2002); effecting positive changes in the psychological and social functioning of adolescents (Tervo, 2001); assisting the treatment process of post-traumatic stress disorder in adult survivors of childhood abuse (Wright, Woo, Muller, Fernandes, & Kraftcheck, 2003); increasing quality of life and fulfilling psychological needs in persons with dementia (Lesta & Petocz, 2006; Ridder & Aldridge, 2003) or Parkinson's disease (Pacchetti et al., 2000); and facilitating communication between imminently dying hospice patients and their families (Krout, 2003).

Cassileth, Vickers and Magill (2003) explored the use of live music as a way to relieve psychological distress amongst patients receiving treatment for cancer. Patients were divided into two groups for this study. One group received standard psychological health treatment including access to recorded music. The 'live music' group received individualised music therapy facilitated by a music therapist. The treatment could involve listening to music, singing and using musical instruments, depending upon the needs of each individual patient. The study found greater improvements in the mood of participants who received the music therapy than those who received standard care; more importantly, the music therapy was found to have a cumulative effect on patients' positive mood. That is, improvements in the mood of patients who were involved in live music were sustained between therapy sessions, and each successive session further reduced anxiety and improved patients' overall mood.

Singing has been widely identified as a specific non-invasive treatment for anxiety. For example, Kenny and Faunce (2004) found psychological improvements for hospital in-patients with chronic pain who participated in group singing activities, in comparison with participants who did not attend the singing sessions and a control group who listened to singing whilst performing standard pain-management exercises. Participants involved in the singing activities reported greater decreases in self-reported levels of anger, anxiety, and depression than participants in the control group and those who elected not to participate in

treatment, although there may have been a self-selection factor involved in terms of patient motivation. Clements-Cortes (2004) found that individualised music therapy techniques that incorporated singing had a number of beneficial psychological outcomes for three terminally ill patients, including reducing anxiety, depression and anger, and inducing a sense of peace, calmness and resolution.

Related to these self-report studies, participation in music-making has been claimed to have a cathartic effect. For example, the terminally ill patients in Clements-Cortes' (2004) study used particular songs as leverage for 'first time' discussions about their own psychological and emotional experiences. Likewise, homeless and disenfranchised people who participated in Bailey and Davidson's (2002) choirs reported that singing allowed them to "let it all out...frustration, anger and all that..." (p.277), allowed them to get in touch with deep feeling, and filled them with joy. Silber (2005) reported similar kinds of emotional release among young women singing in a prison choir. These latter studies move the focus from the therapeutic benefits for individuals participating in music-making, including singing, to the benefits for those participating in group activities such as choirs.

Group-mediated effects on individual wellbeing

Improvements to overall psychological health and wellbeing have been identified in various non-clinical populations participating in group music-making ventures. For instance, Hillman (2002) explored the benefits of participation in an informal singing group for people aged over 60. Prior to joining the singing group, nearly one-third of the sample (27%) rated their emotional wellbeing as either 'poor' or 'average'. In contrast, since joining the group only 11% of the group rated their emotional wellbeing as 'average' at the worst. Singing is also considered effective in helping individuals deal with more common types of anxiety, for example in reducing student anxiety in a large class (Harcum, 1991). Clift and Hancox (2001) found individual benefits for members of a university choral society. The researchers administered an open-ended questionnaire to the group, asking them about the perceived personal benefits of participation in the singing group. Seventy-five per cent of respondents described emotional benefits such as improved mood and stress reduction.

Another study by Clift et al. (2007) involved a large multi-country survey of choral singers in England, Germany and Australia. Reporting on the English arm of the survey, the researchers found that a large majority of the choristers perceived singing as beneficial for wellbeing. Interestingly, even those choristers with a relatively low level of psychological wellbeing as

measured by the psychological scale of the WHOQOL_BREF strongly endorsed the benefits of choral singing. This study also presented evidence on the 'generative mechanisms' by which singing was perceived to impact on wellbeing and health. This evidence was derived from participants' responses to 24 statements on the possible beneficial effects of choral singing and open-ended accounts of what choral singing meant for the 633 participants and their mental health. From these responses, six generative mechanisms emerged: positive affect, focused attention, deep breathing, social support, cognitive stimulation and regular commitment.

Choral singing was experienced as a support in times of depression and lack of self-confidence but also as a way of 'lifting my spirits out of depression'. It was also viewed as a means of forgetting, albeit briefly, pressing family problems. One 70-year-old woman identified the specific aspect of singing that allowed her to do this: 'Hearing the harmonies helps me forget family worries' (p204). The focused attention that singing demanded had the effect of blocking preoccupation with sources of worry and as such can be seen as an effective means of counteracting the ruminative style of thinking that often characterises depression: 'Singing in a choir puts troubles 'on hold', as concentrating on the music requires all one's attention'.

The controlled deep breathing in singing also acted as a way of controlling anxiety and stress. Being part of a choral group conferred social support and friendship, which served as a natural antidote to feelings of isolation and loneliness. Moreover, the regular commitment to attending rehearsals motivated participants to avoid being physically inactive. This aspect of involvement in a singing group could help to prevent or ameliorate psychomotor retardation that is a common feature of depression.

To generate measurable, evidence-based findings, quasi experimental methods have been used to identify the psycho-physiological mechanisms involved in generating the health impacts of singing. For example, in their study aimed at identifying the health benefits of singing, Kreutz et al. (2003) compared a group joining in singing sessions and a group listening to music by measuring cortisol levels from participants' saliva samples. But the broader the mental health effects being claimed, the more difficult it is to isolate measurable indicators of altered mood states, beyond the limitations of self-report measures.

2. Social and collective benefits of group singing

The brief overview above of various studies on singing and health suggests some consensus that participation in music-making, particularly in whole-body activities such as singing, does generate a range of physical, neurological, and psychological health benefits. Nevertheless, it is not only the individual health impacts of singing that have drawn public attention.

Research has increasingly been carried out to document the collective health impacts that singing can generate among people who join together in a singing group.

In recent years, exploring the social impacts of singing has become a focus. A major impetus to research on the social benefits of singing derived from Putnam's (1993) research in Italy where he demonstrated a positive association between the vigour of voluntary organisations, particularly choral societies and choirs, and the level of civic engagement. This finding caused him to conclude that choral societies are an essential form of social capital. According to Putnam, social capital refers to "... the features of social organisation such as networks, norms and trust that facilitate coordination and cooperation for mutual benefit" (Putnam, 1993, p.1).

A study of regional government in Italy (Kaufman, Kraay & Zoido-Lobaton, 1999) provided additional empirical support for Putnam's views. It revealed a strong relationship between the geographical density of choirs and the effectiveness of government institutions in those areas. The civically valuable dispositions created by choirs such as trust, openness, honesty, cooperativeness, tolerance and respect are precisely those that are critical to building social capital (Kaufman, Kraay & Zoido-Loabton, 1999). It is also possible that this correlation indicates the value of strong and effective local government in enabling social capital-rich groups such as choirs to flourish.

A large portion of the research on individual health benefits of singing has been conducted in groups, thereby highlighting several group-related factors that might facilitate the health benefits of music-making. The first of these factors is an interpersonal component that appears to mediate the psychological benefits realised through music 'treatments'. Group singing programs have been claimed to improve mood (Cassileth, Vickers, & Magill, 2003), provide emotional release (Bailey & Davidson, 2005), reduce anxiety and stress (Clift & Hancox, 2001; Kenny & Faunce, 2004; Clift et al., 2007), improve levels of anxiety and depression in nursing home residents (Houston, McKee, Carroll & March, 1998), enhance mental and physical health and wellbeing (Hillman, 2002; Clift et al., 2007; Cohen, Perlstein, Chapline, Kelly, Firth & Simmens, 2006) and improve cognition (Hillman, 2002; Racette, Bard,

& Peretz, 2006). Interpersonal elements might also operate in one-to-one music-making interventions such as music therapy, as the 'therapy' invariably involves an interactive situation between the therapist and the client.

Some benefits of participation in music-making appear to relate to the quality of the social interaction that is a consequence of group or interpersonal musical experiences. One of the participants in Clift et al.'s (2007) study spoke of singing and depression as being mutually exclusive and commented on the satisfaction and reciprocal assistance that was part of the experience of being in a team:

When you sing, you cannot be sad for long. It really lifts your spirits. Being in a choir means you are in a team – you all help each other which gives tremendous satisfaction (p.204).

There is also a plethora of testimonial-type literature that depicts singing groups as spaces where people create deep and meaningful interpersonal connections. Group-related factors cited include a 'shared language', a sense of belonging to the musical community, and shared memories of peak musical moments (Holmquist, 1995). When these factors are added to the shared cathartic experiences that are cited as a feature of music-making (Gridley, 2008; Clements-Cortes, 2004; Silber, 2005), investigation of the 'group element' of singing seems justifiable in its own right.

Moreover, whilst the interpersonal connections that arise through shared musical experiences appear to contribute to psychological wellbeing, the 'greater-than-its-parts' aspect that is fundamental to group music-making also appears to furnish participants with critical interpersonal skills. For example, Silber (2005) found that female prisoners who participated in a singing group learned critical interpersonal skills such as listening, making eye contact, positive anger and emotional control techniques, and an understanding of how to work as a team. Likewise, members of focus groups participating in a comprehensive study of choral participation in America (Chorus America, 2003) identified skills they had learned through being part of a choir that were useful in their social and professional interactions. These skills included team-building, listening and following, developing confidence in social situations, and developing personal discipline.

The ways that these interpersonal skills can translate into improved social connections for group members is highlighted in Hillman's (2002) study with older people. Her research found several forms of increased socialisation amongst singers; their singing group was the only weekly cultural, recreational or sporting outing for almost one-third of the singing

group members. Furthermore, almost all the singers reported having made friends through the group; many of them consolidated this connection by getting together at other times besides those designated for the singing group.

Another study by Cohen et al. (2006) is one of the few longer-term follow-up studies to utilise a quasi-experimental design. It measured the impact of a singing intervention, 30 weekly singing rehearsals as a member of a chorale and several public performances, compared with usual activity on multiple health outcomes. The research was conducted with 166 older healthy adults (65 years or older) from the Washington DC area. Measures of physical health, patterns of health-care utilisation, mental health and social activities were administered at baseline and 12 months after the intervention.

Differences between the intervention and comparison group at baseline were controlled for analyses examining the effects of the intervention. Significant differences between the two groups were reported with the intervention group reporting a higher overall rating of physical health as well as fewer doctor visits and falls. Mental health differences favouring the intervention group included better morale over the 12 month period of the study and lower levels of loneliness than the comparison group. Once baseline differences in depression were taken into account, no significant difference in depression between the two groups remained at the 12-month follow-up. Both groups showed a decrease in their reporting of weekly activities over the duration of the study but this decrease was far more marked in the comparison group. The researchers argue that involvement in the chorale provided opportunities for increasing a sense of control and mastery and for social participation, and that these in turn were responsible for the health benefits observed.

In 2003, Chorus America, a national organisation that aims to develop and promote professional, volunteer and youth choruses in the United States, conducted a large scale study on choruses and choral singers called Chorus America's Chorus Impact Study. This followed an earlier National Endowment for the Arts (NEA) study in 1997 that found singing in a choir was the most popular public arts activity in the United States (NEA, 1998). The Chorus America study was the first-ever national study of choral communities and its primary objective was to identify "...some general characteristics that distinguish choral participants from the rest of society", and to examine "the kind of impact they have in their communities" (Chorus America, 2003, p.3). The research involved: 1) questions posed to the general public in two national telephone polls; 2) six focus groups with choral singers in three regions; 3) an in-depth telephone poll of 623 professional and volunteer choral singers from across the United States; and 4) data gathered from the range of organisations that

support specific kinds of choruses for use in estimating the total numbers of choruses across the country. This study surveyed 347 singers by telephone poll to compare the findings in two regions with the national findings (Chorus America, 2003).

Chorus America reported that the most important insight came from the detailed discussion in the focus groups involving chorus participants. Most participants reported a belief that their choral participation inspired them to improve a range of skills useful in their social and professional interactions. Furthermore, Chorus America suggested that such skills would be beneficial not only to the individuals, but also to others around them and to society as a whole.

A potential extra-personal benefit of collective music-making is an appreciation for diversity. Many choirs and less formal singing groups maintain a repertoire that includes songs from other countries/languages, and from local non-dominant cultural or ethnic groups. Singing groups, especially those with an open access policy, bring together representatives from a range of religions, political and philosophical persuasions, ethnicities, nationalities, genders, ages, physical, mental and socio-economic capacities. An example of how this can occur is provided in Bailey and Davidson's (2005) exploration of participation in choirs for disadvantaged and middle-class people. A number of choristers participating in the Chorus America (2003) study mentioned that "...one of the chief non-artistic benefits of singing in choruses was the opportunity to mix with people they ordinarily would not meet" (p.4). The study reported that choristers participating in this research "...felt strongly that this component of their choral experience – the bridging of social gaps, the opening to different perspectives on life, even apart from the music itself – is one of the most rewarding and sustaining aspects of their choral singing" (p.4). "These people whom I love dearly are politically or religiously very different from me" or "Our chorus is a huge social melting pot. You have the opportunity to meet people from every age group, social background and ethnic background" (p.11).

However, despite participants' views in the Chorus America study (2003) that singing in their choruses afforded them the opportunity to mix with people outside their usual social group, the weight of evidence from a number of studies indicates a decided lack of social, educational and cultural diversity amongst those who actually sing in choirs (Bell, 2004).

To identify further the different characteristics between choral participants and the general population, Chorus America (2003) asked the professional and volunteer choristers participating in the study a series of questions to indicate their level of community

involvement. These included questions about volunteerism, membership in civic organisations, the skills they have developed that are useful in community work, their charitable giving, their ability to mix with people of diverse backgrounds, their sociability and their level of political activism. Each finding was then compared to similar data from the general public.

The outcomes of this research indicated that choristers, who constitute only 9.5% of America's population, make a significant contribution to the social infrastructure. As might be expected, more choristers supported other choirs, arts outlets (e.g., museums) and performances (e.g., theatre, dance, opera, orchestra) than the general public. In addition, 63% gave money to arts organisations. This generosity was not limited to the arts. Sixty per cent of respondents made a financial contribution to non-arts charities, and 42% supported a political party financially. Furthermore, three-quarters of respondents (76%) said they volunteered in their community, and 20% had worked for a political party (compared with 3% of the general public), while 93% said they voted regularly in national and local elections, in comparison with the official 69% voting participation rate of the general American public (Chorus America, 2003). In general, the results suggest that the professional and volunteer choristers who participated in this study have a higher level of community involvement compared to the general public (Chorus America, 2003). Participants themselves felt that the opportunity to contribute to social harmony was one of the most rewarding and sustaining aspects of their choral singing. However, there is no clear indication from this study whether this higher level of community involvement among the choral singers was a result of their participation in the choruses or whether they had been actively involved in the community since before they became involved in the choruses.

Recently, Chorus America reported on the findings from a new study, *The Chorus Impact Study* (2009) which included a new component examining the effects of choral singing on childhood development. The study estimated that 32.5 million American adults regularly sing in choruses, up from 23.5 million estimated in the earlier Chorus America study (2003) as well as 10.1 million American children.

The Chorus Impact Study also focused on the social capital and citizenry impacts of involvement in choirs. It found that choral singers, compared with the rest of the population, were almost three times more likely to be officers or committee members of local community organisations; 78% indicated they 'at least sometimes' volunteered their time in their community compared with 50% of the general public; 74% agreed that singing in a chorus had helped them become better team leaders or participants in other areas of their

lives; nearly two-thirds agreed or strongly agreed that being in a chorus helped them to socialise better in other areas of their lives; they donated 2.5 times more to philanthropic organisations than the general public; nearly all (96%) voted regularly compared with 70% of the general population, and they were twice as likely to attend other cultural and arts performances such as theatre, opera and orchestra and to visit museums and art galleries.

The impacts on children were reported by their parents. More than two-thirds (71%) reported that their children had become more self confident since joining a chorus; 70% said their children's self discipline had improved; and 69% believed their children's memory skills had improved. Parents also reported that the academic achievement of their children had improved since joining a choir. These parental assessments were shared by the educators who were surveyed (Chorus America, 2009).

It is not only in America that choral singing is reported as a promising way to promote community health. Another example is 20,000 Voices (Stacy et al., 2002), an innovative song project which was set up in Northumberland, UK, in 1993 by the Mid-Northumberland Arts Group. This project was intended to: encourage the development of singing skills and enjoyment; promote singing to the widest possible group; and provide activities in a wide range of vocal styles. Their activities included song workshops and concerts for preschool children to work with elderly people in Age Concern centres; they offered activities for advanced singers as well as for those saying that they could not sing (Stacy et al., 2002).

No formal evaluation of the 20,000 Voices project has been carried out to date. However, as reported by Stacy et al. (2002), workshop leaders are familiar with an extensive set of field data, the informal, unsolicited, anecdotal comments from those who were involved in their workshops or rehearsals of perceived benefits of singing. For example, a woman who was once in an extremely abusive marriage spoke about the perceived benefit of joining this project: "My life has been changed completely by coming to your singing classes. People say that I look like a different person and I've grown in confidence" (p.160). Another participant shared that "I feel that I've found my voice after being told by my family and school teachers to shut up" (p.160). It is this kind of quote that led Stacy et al. (2002) to observe that in the context of community singing, "the phrase 'found my voice' could have several layers of meaning: from being able to sing, to being more assertive and, within a feminist analysis, to having more power over one's life and situation" (p.160). Amanda Lohrey made a similar observation in her 1997 essay 'The clear voice suddenly singing'.

The mental health benefits of singing in groups are being increasingly promoted. For example, the Association of Irish Choirs in conjunction with the Arts Department of Wexford County Council and Mental Health Ireland launched Ireland's first National Choral Singing Day to mark World Mental Health Day in October 2008. Choirs throughout Ireland and anyone else who was interested in singing were encouraged to come together to experience the positive therapeutic benefits of singing with others, in choirs or other groups, at school, in the workplace or at home. The Chief Executive of Mental Health Ireland, Brian Howard, endorsed the idea that singing was good for mental health and offered a means of nurturing wellbeing and warding off the negative influences which can lead to depression and other mental health problems (Waterford Today Newsletter, 2008).

In Australia, an account of the perceived benefits of choral singing for promoting community health was documented by Fay White and Anne-Marie Holley (2001). They identified the particular benefits of community singing for specific communities, arguing that community singing can:

- help overcome isolation – a key health issue in rural areas
- provide a venue for the economically different to meet where there is marginalisation of the poor
- provide an opportunity for 'cultural activity that is not sport oriented'
- be a gender-balanced activity where men and women share rather than compete, that is not based on physical prowess.

The authors concluded that group singing and community choirs provide public expression, new avenues for identity, and a venue for establishing connectedness and participation that is revitalising (White & Holley, 2001). They observed that, to be able to generate collective health impacts, community singing should be based on two principles:

- participation by all, with no auditions or exclusions, and catering for all levels of interest
- shared experience: participants share time, space, and the pleasing sounds of their own voices in a group. Moreover, everyone makes a financial or 'in kind' contribution.

White and Holley's paper did not elaborate on how they formed these conclusions. However, comments made by participants in Bohan's (2005) qualitative exploration of White and Holley's 'Vocal Nosh' programs in Melbourne provide some support for their claims. "I

have become more tolerant. Sometimes others don't get it as easily as I do, this has been good for me" said one singer whose other life is as a lead singer in a band. Another singer who took a leadership position in his working life also noted consolidating skills in collegiality "It's not about me, it's about us". Bohan's study identified how a group's repertoire can be a vehicle for the integration of diversity into the philosophy of singing groups. "I find it hard to learn some songs in other languages, but when I get them I feel really proud. I have learned something about someone else." One participant commented that being able to sing songs from her culture "affirms my language and my family's culture". Another indicated that this same perception that one's culture is valued can occur for non-group members who are exposed to the group's philosophy: "When we perform a song in another language and someone who speaks that language comes up and talks to us, it feels good." Or, as a member of the Brunswick Women's Choir put it:

"What I most love is that others have different views and that we are still a coherent group. Somehow a balance is formed...The music brings us together, a shared sense of pride and community keeps us there (Gridley, 2008, p.304).

These studies – the Chorus Impact Study conducted by Chorus America (2003; 2009), Stacey et al.'s (2002) report on 20,000 Voices, and Bohan's (2005) qualitative exploration of White and Holley's (2001) philosophy – offer some support for the claim that community singing generates a range of positive impacts which are beneficial for promoting health and wellbeing on both an individual and communal level. On the individual level, it seems to facilitate the development of a range of skills useful for one's social and professional interaction, as reported in Chorus America's study, and to develop a sense of empowerment (Stacey et al., 2002) and an appreciation for diversity. At the communal level, participation in community singing appears to be positively associated with higher levels of community involvement (Chorus America, 2003) and the establishment of social connectedness in the community (White & Holley, 2001).

Most of the available research on the community-level health benefits of group singing is based on self-report surveys, anecdotes or testimonials, with only the two Chorus America studies (2003; 2009) basing their claims on national scale studies. Therefore, as Stacey et al. (2002) argued, in terms of doing research in the area of singing and health, the next step is to "evaluate and collate evidence on the impact of projects and programs. In this way we will be better equipped to utilise a range of evidence-based research to further inform our arguments on the value of singing and health" (p.161). In making a similar case for the contribution of the arts in general to community wellbeing, Coalter (2001) called for more

systematic and robust quantitative research into actual outcomes produced by arts-based initiatives, such as social inclusion, active citizenship or community development.

Further research on community singing could also follow up the findings reported by previous studies in this area that are open to question. For example, the Chorus Impact Study conducted by Chorus America (2003) reported a positive correlation between participation in choral singing and the level of community involvement, but the study design was unable to establish a causal relationship, and did not examine what it is about choral singing that might promote higher levels of community involvement among choristers compared to the general public.

So, the general conclusion that may be drawn from these studies is that music-making groups have the potential to impart specific skills and facilitate an appreciation of difference that may improve the social harmony within and between communities. However, the studies also highlight the difficulty of exploring the impacts of community-embedded music-making. As previously mentioned, few studies have been conducted that explicitly measure this relationship, that is, the impact of music-making within communities on the communities themselves. Studies like that of Kaufman, Kraay & Zoido-Lobaton (1999) that have attempted to explore this transaction have often utilised the concept of 'social capital'. As noted earlier, social capital refers to the elements that create the intangible psychosocial framework that is the foundation for 'living' within a group or community.

The concept is necessarily broad in definition because the ways that social capital exists depend upon the particular characteristics of a group or community. Nonetheless, it provides a useful way for research to capture some everyday aspects of human living in communities. For example, Hillman (2002) found a reduction in the number of members of an elderly people's singing group who travelled home alone. This finding taps into a social capital indicator – the presence, quality and breadth of an individual's social network. It also implies that participation in music-making groups facilitates the safety of a community – another indicator of the presence of social capital (Putnam, 1993; 1995), and a key determinant of community mental health (VicHealth, 2005).

Indicators of social capital can be measured in individuals; what is missing is an understanding of the *combined impact* of these highly resourced and motivated individuals on the communities and societies in which they operate. Although still focused on individual-level factors, Hyypä and Mäki's (2003) examination of the role that social capital played in health and wellbeing differences between two communities inhabiting the same geographic

space provides some insight into the possible impacts that socially engaged music makers (and others) might have at a collective level. Since epidemiological health surveys have been published in Finland (i.e., the 1930s), the Swedish-heritage residents of the Ostrobothnian region of Finland have been outliving Finnish-born residents. Among the many disparities in health and wellbeing between the Swedish-Ostrobothnians and their Finnish-born neighbours, the Swedes have consistently lower rates of suicide, violent and accidental death and cardiovascular mortality than the Finnish-born residents of the region. Moreover, there is little overall disparity between Finnish and Swedish residents for many dimensions of social opportunity including socioeconomic status, education and access to health resources (McRae, 1997, cited in Hyypä & Mäki, 2003).

To determine whether there were underlying disparities in social capital between these two communities that might contribute to overt differences in health and wellbeing, the authors designed a survey that measured social capital indicators such as:

- social ties
- friendship networks
- voluntary participation in clubs and associations
- perceived trustworthiness of others
- social engagement including participation in sports, arts or political clubs and attendance at social, political and sporting events.

The responses for these questions were indexed against health and demographic measures such as weight, height, self-reported alcohol and cigarette use, self-rated health, diagnosed disease or disability, employment status, urban/rural residence, number of family members, and education.

Overall, the study identified two components of social capital that could contribute to greater life expectancy and collective health within the Swedish community. First, it demonstrated the importance of political instruments in the facilitation of social health. The conditions of living for the Swedish community of Ostrobothnia are backed by constitutionally guaranteed rights that allow them to practice and foster Swedish culture within the region. More saliently for the present discussion, the Swedish community was distinguishable from the Finnish community in its “tight and rich” (Hyypä & Mäki, 2003, p.778) civic and social networks. That is, Swedes were highly engaged in a variety of group activities within their community. This increased both friendship/social networks and

perceived trustworthiness, meaning Swedes were more confident than their Finnish peers to 'reach out' in times of need.

The study conducted by Chorus America suggests that as a collective activity, singing can provide various benefits beyond the individual health impacts as reported in a number of studies reviewed earlier. The study demonstrates the potential of the choral field to address the cultural and civic needs of communities. Chorus America's (2003) study was able to explore the positive contributions that choristers could make to their communities, through direct actions (volunteerism, civic organisation membership, political activism), indirectly (donations to charities), and through their individual qualities (community work skills, sociability, appreciation of diversity). Similar findings on the social capital building dimensions of singing in a chorus were reported in Chorus America's Chorus Impact Study (2009).

Hyppä and Mäki's (2003) research indicated that group-forming activities such as community-based singing groups can facilitate the development of social capital in communities, which has a positive impact on individual and community-level physical and psychological health and wellbeing.

Conclusion

Participating in 'the arts' has been variously claimed to offer health benefits, social benefits and community benefits. In Australia at least, there is a wave of interest in art as a tool for therapy, social justice, health promotion, enhancing community wellbeing and boosting local economies. This increasing attention has been both welcomed and resisted by 'artists' of all kinds. And as governments consider calls for increased funding of artistic initiatives on the basis of their purported benefits for individuals and communities, a number of questions arise.

VicHealth is currently concerned with implementing academically rigorous research methods to improve the knowledge base about the benefits of community-based arts initiatives such as group singing programs. In a review of the purported health benefits of such initiatives, McQueen-Thomson and Ziguras (2002) cautioned that while the benefits of participation in community-based arts initiatives are well documented, the literature can be improved through research that focuses on the following:

- known determinants of health rather than broad social indicators

- participants and audiences rather than organisers
- large sample sizes
- longitudinal research.

The research that is the subject of the current review does not, for the most part, incorporate all of these desired parameters. Known determinants of health including social position, race, gender, occupational and marital status and interpersonal violence have not been the focus of any of the studies reviewed here. Indeed, there is evidence from a number of studies including a review by Bell (2004) indicating that those who participate in choirs differ in socially significant ways from the general population. Based on her review of American studies, Bell provided a profile of community singers: women singers outnumbered men singers by as much as 2:1; a majority of singers were over 40 years of age; most (96–99%) had graduated from high school and, in one study nearly half (49%) had earned graduate degrees (Bell, 2000); and minorities were disproportionately underrepresented. In our own survey of singing group members (Gridley, 2008), the sample was similarly skewed towards an Australian-born, English-speaking, female, tertiary-educated group on relatively high incomes.

As recommended by McQueen-Thomson and Ziguras (2002), some studies, notably the Chorus America Study (2003), the Chorus Impact Study (2009) and the cross national study exploring choral singing and psychological wellbeing by Clift and colleagues (2007) have utilised large sample sizes, and a number have focused on the perspectives of participants (Hillman, 2002; Clift & Hancox, 2001; Clift et al., 2007). But prospective and quasi-experimental studies are few in number and those that have been carried out have relatively short periods of follow up (Cohen et al., 2006). However, while methodological problems exist with a number of studies as discussed earlier, the weight of findings in the available evidence base does suggest that group singing is a powerful personal and social health promotion activity.

Findings on the improved social as well as personal dimensions of emotional health and wellbeing that are associated with singing in groups are strong and consistent. Numerous studies utilising different research designs and methodological approaches have reported the following benefits of singing in groups:

- increased self-confidence, empowerment, wellbeing and interpersonal skills
- a general lifting of the spirits and a sense of joy and accomplishment

- lowered feelings of social isolation, depression and anxiety
- increased social capital through participation in social, cultural and community activities
- denser social and friendship networks.

The importance of a love of music, expressed by participants in many studies as their primary reason for joining choirs, speaks to the need to foster this love early in life. School-based programs have a critical role to play by providing 'positive school experiences, including effective teaching and social acceptance' (Holmquist, 1995, p.14). Positive school experiences involving social acceptance imply the modelling of interactions that are respectful and just and as such, contribute to the development of optimal mental health as outlined in the VicHealth definition of mental health and wellbeing.

Currently, less than a quarter of the adult American population is engaged in choral singing according to Chorus America (2003; 2009) estimates. The 2003 Chorus America study concluded that choral singing was an accessible entry point for arts exposure for school children that had fewer economic, cultural and educational barriers than other art forms. Nevertheless, the 2009 Impact Study found that choral singing opportunities in schools had actually decreased, and described this as a missed opportunity for leveraging the benefits that choruses bring to the children, adults and the communities they serve.

To increase the proportion of adults participating in choirs, facilitate greater social and cultural diversity amongst choir members and disseminate the health benefits of singing more widely across the population, strenuous efforts must be made to introduce more rather than fewer school-aged children to the opportunity of singing in choirs. The experience of the British 20,000 Voices program (Stacy et al., 2002) demonstrates that large increases in participation by both children and adults are possible. More than 100,000 voices are now involved in seeking to realise the objectives of the program to achieve a sense of achievement, a sense of belonging to a group and a sense of pride. In Victoria, singing has become one of the most prominent community-based arts initiatives. Since 2001, VicHealth has invested nearly half a million dollars in Community Music Victoria's Victoria Sings program, designed to stimulate community-based singing throughout the State, with a view to strengthening communities and supporting the mental health and wellbeing of community members (Community Music Victoria, 2006). From the perspective of one choir member, it is money well spent:

“For me, now, the space and place I live in is stamped with the experiences of singing with the choir...a virtual village of belonging, that has made this my home”. (Gridley, 2008, p.305)

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