

Canterbury

District Health Board

Te Pōari Hauora o Waitaha

Evaluation of the Rockers of Ages Choirs

**THIS DOCUMENT HAS BEEN PREPARED BY
COMMUNITY AND PUBLIC HEALTH**

Author	Susan Bidwell
Data analysis	Kristi Calder
Additional writing	Kristi Calder Sarah Colhoun Richard Monthy
Literature Search	Susan Bidwell
Peer Reviewer	Annabel Begg
Final version	10.7.12

The information contained in this document may be derived from a number of sources. Although CDHB has taken reasonable steps to ensure that the information is accurate, it accepts no liability or responsibility for any acts or omissions, done or omitted in reliance in whole or in part, on the information. The Canterbury District Health Board accepts no responsibility for the manner in which this information is subsequently used.
© Canterbury District Health Board, 2011.

Introduction

The Rockers of Ages Elders' Choirs is an initiative of the MUSE Community Music Trust, a charitable trust based in Christchurch.¹ The Trust is run mostly by volunteers with contracted (paid) tutors and some contracted support staff.

After the major earthquake on 22 February 2011 many people had damaged homes, the normal infrastructure was not working, and people's social networks of friends, family, neighbours and their support services were scattered. The Rockers of Ages initiative aimed to provide an enjoyable activity in a non-threatening supportive environment that would lift people's spirits and give them something positive to focus on. Although the aftermath of the earthquake gave impetus to the project - "Sing your way out of the earthquake blues" was the by-line used to promote the choirs - the MUSE Trust had been planning for some time to organise choirs for older people, inspired in part by the movie "Young at Heart" which featured an older person's choir in the United States singing modern, popular songs.

Four choirs were set up, each in an area that had suffered significant earthquake damage: Kaiapoi, St Albans, Aranui, and Sumner. During the subsequent year, the Aranui choir moved location to Linwood, where it now meets. The cost of the tutors has so far been covered by a grant from Hagley Community College from adult education funding. The project receives promotion and coordination support from the Communities Team of Community & Public Health, CDHB. Additionally, Wellbeing North Canterbury² and the Sumner Bays Union Trust³ cover the cost of the choir venue hire and provide promotion in their respective areas.

Background theory and literature

Participative singing as a form of health promotion is underpinned as a health promoting initiative by several streams of theoretical literature. The biopsychosocial model of health first proposed by Engel (1977) considers the multiple contributions of biological variables, as well as the psychological and emotional state to health and disease. Gick (2011) provides a good overview of the explanations that have been put forward for the mechanism of the mind-body interaction, particularly the various stress factors that affect the immune response. The biopsychosocial model of health has some overlap with the Maori models of health such as the Te Whare Tapa Wha.⁴ Thus experiences which support and raise psychological and emotional wellbeing may also improve physical health. In this respect, participation in the arts, including participative singing, is receiving increasing attention for its health promoting potential. In 2006 the Journal of the Royal Society for the Promotion of Health

¹ The Muse Community Music Trust <http://www.themuse.org.nz>

² Wellbeing North Canterbury <http://www.wellbeingnc.org.nz/>

³ Sumner Bays Union Trust <http://www.sumnerbays.org.nz>

⁴ See <http://www.health.govt.nz/our-work/populations/maori-health/maori-health-models> The biopsychosocial model however lacks the whanau (family) dimension that is important in Maori models of health.

devoted an entire issue to the topic, with attention to the growing evidence of the physical, mental, and emotional benefits that may derive from singing (Hacking et al 2006; Skingley & Vella-Burrows 2010; Greaves & Farbus 2006).

Singing is used for its therapeutic benefit for people with a range of medical conditions including respiratory diseases such as COPD and asthma (Bonhila et al 2009; Eley & Gorman 2010), and with speech disorders following brain injury or stroke, or in people with Parkinson's Disease (Di Benedetto et al; Tamplin 2008). Other applications have been to assist in reducing snoring (Ojay & Ernst 2000), coping with pain (Skingley & Vella Burrows 2010; Kenny & Faunce 2004) and in the care of people with dementia to aid communication and evoke positive emotions (Hammar et al 2011; Gotell et al 2009). Singing may also be useful as a supportive therapy in cystic fibrosis and irritable bowel syndrome (Grape et al 2010; Irons et al 2010).

As well as having physical benefits, singing provides an emotional uplift that improves mood and general wellbeing both in people with medical conditions and those who are well. A study by Clift & Hancox (2001) that surveyed 91 members of a university choral society found that 93% of respondents believed that singing in the choir made their mood more positive, 89% reported feeling happier, 71% reported that singing improved their mental wellbeing, and more than 75% reported that it made them calmer and more relaxed. A substantial number of respondents also believed that participating in the choir had improved their respiratory function and posture and that they had gained social benefits through new contacts and friendships.

Singing also offers the opportunity not only for emotional uplift but the opportunity for continually mastering new skills and more difficult material. It therefore, fills both the qualities that are considered essential ingredients for wellbeing: *hedonia* (a state of pleasure) and *eudaimonia* (a sense of meaningfulness or engagement in life) (Berridge & Kingelback 2011). This feeling of meaning and engagement is emerging as a hitherto under-recognised but crucial component of health promotion and one which is able to "... lead to transformative health experiences and enhanced quality of life" (Kimiecik 2011, p.769).

Relevance to older people

A considerable part of this overall interest in participative singing has been on the health promoting benefits that may be achieved for older people. Most developed countries, including New Zealand, have ageing populations and the proportion of older people is expected to rise from 12.3% at the last (2006) census to 19% over the next two decades (Ministry of Health, 2006). The process of ageing is associated with declining levels of physical capacity and ability to carry out normal activities of daily living. While improvements in health care, lifestyle, education, and better nutrition have given rise to a "compression of morbidity", that is, the rate of functional decline in ageing has slowed so that the population entering its 80s is less impaired than it was several decades ago (Manton and Gu, 2001; Mor, 2005), the numerical increase of the ageing population still means that the number of elderly people with functional disabilities in future will be larger than it has ever been (Mor, 2005). Therefore interventions which help to retain health and independence in older people are likely

not only to benefit the participants themselves, but reduce the load on the health system and society as a whole.

There have been a number of studies that have specifically focused on the effects of belonging to a singing group or choir for older people. The Sounds Lively! choirs were introduced by the Isle of Wight Healthcare NHS Trust in 2002 for older people receiving its programmes of community healthcare (Eades and O'Connor 2008). Fifty nine people who attended between 2002 and 2005 and completed a survey evaluating the programme reported benefits including enhanced mood (73%), social benefits (64%), and increased confidence and self esteem (35%). To the question, "does singing affect your health?" 81% responded yes, including 20% who reported physical improvements in breathing, posture and exercise. Another study by Cohen et al (2006) using a quasi-experimental design recruited 166 older adults from the Washington DC area and assigned them to either an intervention (group singing in a professionally conducted chorale for 30 weeks) or to a comparison group which continued with any usual activities. The intervention group reported using fewer over-the-counter medicines and had a decrease in falls whereas both these measures showed an increase over the previous twelve months in the comparison group. Compared to the comparison group, those who had participated in the intervention had improved self-rated health, fewer doctor visits, improved morale, and were less lonely. The sustained involvement in a high quality arts programme with the accompanying increase in social interaction was found to have resulted in a true health promoting and preventive effect in this study and reduced the risk factors for needing long-term care.

Connected to the concept of *eudaimonia* or meaningfulness, is the issue of control for older people. Rodin (1986) draws on the biopsychosocial model of health to demonstrate that the health of older people is strongly affected by control-enhancing or control-restricting life circumstances. As well as declining physical capacity, ageing is associated with a loss of choice and control through more frequent contact with the health system, and experiences such as the loss of friends and family which limit opportunities for reinforcement of self esteem and sense of competence. Stereotyping of the elderly as helpless may lead to the undermining of personal control by well intentioned but misguided attempts to assist with tasks that could be performed independently, particularly in institutionalised elderly people (p. 1271). In contrast, increased opportunities for control that are available (but not imposed - which can create more stress and lack of control), tend to create a greater sense of personal efficacy and can have a positive effect on physical and psychological status (1275). Attempting and mastering a new skill such as may be provided by participating in a choir is a control-enhancing experience that is likely to increase confidence and purpose in life.

Participating in a meaningful group activity with like-minded people such as a choir has additional social benefits in reducing isolation and building networks of friends. It has been consistently shown that having social contacts and taking part in activities outside the home are protective factors for physical and mental decline as people age (Freeman et al., 2006; Griffen et al., 2009; Robb et al., 2008; Hammerman-Rozenberg et al., 2005; Harris and Thoresen, 2005). Reduced institutionalisation, increased survival and higher cognitive function have all been associated with having more social contacts and therefore more social support (Yeh and Liu, 2003; Giles et al.,

2005; Sarma 2009). For example, a Swedish study investigated the possible influence of leisure time cultural activities (including singing in a choir or making music) on the survival of a large random sample of 12, 982 people aged between 16-74 years during 1982-3 (Bygren et al 1996). After controlling for eight confounding variables (age, sex, education level, income, long term disease, social networks, smoking and physical exercise) the study found those people who attended or participated in cultural events frequently had a better chance of survival compared to those who participated or attended such events least often (relative risk 1.57, 95% confidence interval 1.18-2.09 for those rarely attending).

Lastly, theories related to resilience are important for the particular circumstances after the earthquakes in Christchurch in which the Rockers choirs were set up. The literature around resilience incorporates many other theories including those outlined above. Richardson (2002) outlines the current understanding in a “meta-theory” of resilience in which it is considered to be the force that drives a person to grow through adversity and disruptions. Resilience, does, however, require energy which “comes from within the human spirit or collective unconscious of the individual and also from external social, ecological, and spiritual sources of strength.” (Richardson 2002, p. 319) Thus those who have strong social and community networks are more likely to have a source of practical and emotional support that can buffer the effects of stress and promote resilience after disasters (Chang 2010; Patterson 2010; Jacob 2008). A previous example of participating in a choir as a means of support for severe post-disaster stress was the Hurricane Choir set up after Hurricane Katrina as “...a culturally appropriate community initiative” that fitted with the musical heritage of South Louisiana (Harvey et al 2007, p. 357). One hundred and two hurricane disaster evacuees and survivors, many of whom had lost a family member or close friend, had a 12 week intensive rehearsal period culminating in three public performances in the spring of 2006. In this study participants were enrolled in a web-based system that monitored their mental health using a range of standardised measures for depression, coping, and presence or absence of mental health and other medical conditions. Unfortunately no results from this study appear to have been published to date.⁵

Limitations of the evidence base

In spite of the accumulating evidence on the benefits of singing, a recent comprehensive review of the literature on singing, health and wellbeing (Gick 2010) concluded that the evidence, while promising, needed to be supported by further research “...to confirm preliminary findings of the health and wellbeing benefits of singing, determine their underlying mechanisms, and compare singing to other activities that may benefit health and wellbeing” (Gick 2010, p. 28). One such study which is already in process is that by Skingley et al (2011), a rigorously conducted randomised controlled trial that aims to add to the existing body of evidence on the value of singing for older people. Participants will be randomised to a 12 week singing intervention or a control group that will continue with usual activities. Health related quality of life measures will be administered at baseline, and at three and six

⁵ Authors of the study were contacted by email on 19 April 2012, but no reply was received.

months follow up. The project is an initiative of the Sydney de Haan Research Centre for Arts and Health⁶ at Canterbury Christ Church University in England.

One of the key problems in gathering this level of evidence is the difficulty in measuring emotional wellbeing and resilience. Many of the studies cited above relied on self report; others used standard validated measures designed to look for the presence or absence of mental illness rather than focusing on positive qualities that make up wellbeing and quality of life. As Norris et al (2008) have noted, however, resilience incorporates far more than being free of psychological disorder. It also means that individuals have healthy patterns of behaviour, adequate role functioning, and a satisfactory quality of life. All these characteristics are difficult to measure with respect to ascribing outcomes of a particular intervention (such as participation in a singing group), given the complexity of other factors that affect people's lives. Some scales are becoming available, such as the Connor Davidson Resilience Scale (Connor & Davidson 2003), which focuses on personal qualities, but do not appear to be in widespread use as yet in health promotion studies.

Evaluation method for the Rockers of Ages Choirs

A mixed methods approach was used to evaluate the Rockers of Ages project. People attending the choirs during their regular sessions in the last week of March 2012 were asked to fill in a simple survey during the mid-session social break. A staff member from Community and Public Health distributed the survey forms and explained the importance of the survey in providing an evaluation of the choirs and potentially relevant information in applying for further funding. The survey aimed to gather information on the relative importance that members placed on the music and social components of the choir respectively, any benefits they believed they had gained from attending, any barriers to attending for themselves or others they knew of, and to gather demographic data on sex and age. There was also a space for respondents to add any additional comments. The survey was designed to be easy to read and to be completed quickly in order not to take away from the choir session itself. The questionnaire is shown in Appendix I. It was made clear to choir members that the survey was voluntary and that no names or identifying details were to be included. Responses to the survey were entered into an Excel spreadsheet which was then transferred to SPSS for analysis.

To add more depth and detail to the survey responses, a convenience sample of choir attendees was recruited at the time of the survey for interviewing individually. Those present on the day of the survey were asked to indicate on a separate sheet if they would be prepared to be interviewed about their experiences of participating in the choir. Resource limitations and time constraints made it important that interviews be short and simple. A semi-structured interview guide was developed that explored the following areas:

- How the interviewee first heard about the choir and why they decided to join; if not mentioned, the interviewee was prompted to say whether or not they had previous singing experience

⁶ See <http://www.canterbury.ac.uk/Research/Centres/SDHR/ResearchProjects/Home.aspx>

- What it is about the choir that keeps the interviewee coming back each week.

Four staff from Community & Public Health were briefed on the approach to interviewing to ensure consistency. The interviews were restricted to a maximum of ten minutes so that they could be fitted in to the time available during the mid-session break of the respective choir sessions. Interviews were carried out during the first and second weeks of May 2012. The tutors and one volunteer who works with the MUSE group were also interviewed for their perspectives. Notes were taken by the interviewers rather than verbatim recordings, again because of resource constraints related to availability of recording equipment, and the lack of staff time available to transcribe verbatim recordings. Notes from the interviews and the open text comments from the survey were compiled into one document and coded using an iterative thematic approach according to that described by Green & Thorogood (2009). To preserve anonymity respondents were assigned an alphabetical letter beginning with A for the first interviewee, B for the second and so on. Mrs or Mr was assigned to indicate whether the interviewee was male or female. The analysis drew on the theoretical background and literature of social engagement and sense of control in the elderly, with additional reference to that on resilience and coping after natural disasters.

Results

The survey

A total of 69 surveys were received, an 81.2% response rate from an estimated membership of 85 choir members.⁷

Enjoyment

The first two questions of the survey asked the participants to rate on a scale of 1 to 5 (with one being the least and 5 being the most), firstly, how much they enjoyed the singing and secondly, how much they enjoyed the social contact from participating in the choir. All 69 respondents completed both these questions. The mean response to Question One was 4.6, with 67 respondents (97.1%) rating the singing as 4 or 5 on the scale and 2 (2.9%) respondents rating it at 3. In Question Two, the mean response was only slightly lower with a mean of 4.4. Fifty-nine respondents (85.5%) rated their enjoyment of the social contact at 4 or 5 on the scale, eight at 3, and one at 2.

Question Three asked participants to indicate whether the singing, the social contact, or the concerts were the most important for them, or whether all were equally important. This question was also completed by all respondents. Thirty six respondents (52.2%) indicated that they felt the singing was the most important part of attending the choir; one person chose the concerts as the most important (1.4%), while

⁷ There were 85 people on the list of attendees at the time of the survey, though attendance fluctuates somewhat from week to week and all members were not present on the days that the survey was distributed.

32 (46.4%) indicated that the whole experience (singing, social contact, and concerts) was important. No respondents chose the social contact as the most important.

Positive changes

Participants were asked to indicate if they had experienced any of the positive changes listed in **Table 1** that felt had resulted from belonging to the choir. Over two thirds of those who answered this question (68.7%) indicated that attending the choir had increased the time they spent with other people; almost half (49.3%) said they had experienced an increase in overall wellbeing and 31.3% that membership had reduced their stress. There were two missing responses (2.9%). Sixteen participants wrote an additional comment in the “other changes” option. These have been incorporated into the qualitative analysis.

Table 1: Positive changes

	Responses		Percent of participants
	Number	Percent of responses	
Sleeping better	4	2.8%	6.0%
Reduced stress	21	14.8%	31.3%
Increase in overall wellbeing	33	23.2%	49.3%
Increase in time spent with others	46	32.4%	68.7%
Increase in number of friends	18	12.7%	26.9%
Other changes	16	11.3%	23.9%
None of these	4	2.8%	6.0%
Total	142	100.0%	211.9%

Note that percentages add to more than 100 as participants could choose multiple changes

Difficulties or barriers

Participants were asked about any difficulties or barriers to attending the choir that had affected them (**Table 2**). Fifty three participants (76.8% of total participants) answered this question with 37 (58.7%) indicating they had no difficulties. Transport problems which had been expected to be the chief difficulty were indicated less frequently (five respondents, 7.9%) than not feeling well (nine respondents, 14.3%), and style of music (seven respondents, 11.1%) and caring for others (six respondents, 9.5%). Four comments in the “other difficulties, please explain) also related to difficulties with the style of music, and/or songs not in English.

Table 2: difficulties/barriers to attending the choir

	Responses		Percent of participants
	Number	Percent of responses	
transport	5	7.1%	7.9%
not feeling well	9	12.9%	14.3%
caring for others	6	8.6%	9.5%
weather conditions	2	2.9%	3.2%
style of music	7	10.0%	11.1%
other	4	5.7%	6.3%
no difficulties	37	52.9%	58.7%
Total	70	100.0%	111.1%

Question Six was included at the request of the choir tutors who wanted to know if those who attended the choir knew of others who would like to attend but could not for any reason. This question had a largest number of missing responses in the survey. (16, 23.2%). Of those who did complete this question, 41 (74.5%) indicated that they did not know of anyone in this category. For those who knew someone, the most usual difficulty was transport (three responses), with not feeling well, caring for others, and the style of music each having a single response. Eight respondents (14.5%) ticked the “other” option which asked them to explain further. Nearly all these responses related to work commitments which prevented attending during the daytime.

Demographic details

Table 3 shows the ages of the survey respondents. Sixty six respondents answered this question. More than two thirds of respondents (69.6%) were over 65 years, with a quarter (26%) being less than 65 years. Three respondents (4.3%) did not complete this question.

Table 3: Age of survey respondents

		Frequency	Percent	Valid Percent ⁸	Cumulative Percent
Valid	Under 40 years	1	1.4	1.5	1.5
	40-64 years	17	24.6	25.8	27.3
	65 years and over	48	69.6	72.7	100.0
	Total	66	95.7	100.0	
Missing		3	4.3		
Total		69	100.0		

Table 4 shows the gender of the survey respondents. Four respondents (5.8%) did not complete the gender question, leaving 65 valid responses. Of these 57 (82.6%) were female and 8 (11.6%) male.

Table 4: Gender of survey respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	8	11.6	12.3	12.3
	Female	57	82.6	87.7	100.0
	Total	65	94.2	100.0	
Missing		4	5.8		
Total		69	100.0		

Table 5 shows the ethnicity of the survey respondents.

There were sixty six (95.7%) valid responses to the ethnicity question with three (4.3%) missing. Sixty two respondents identified as New Zealand European (93.9%), with two Maori (3.0%), one Samoan (1.5%) and five other (7.6%). Note that totals add up to more than 100% in the final column as some respondents identified with more than one ethnicity.

⁸ Valid percent excludes the non-respondents from the total

Table 5: Ethnicity of survey respondents

	Responses		Percent of participants
	Number	Percent of responses	
New Zealand European	62	88.6%	93.9%
Maori	2	2.9%	3.0%
Samoaan	1	1.4%	1.5%
Other	5	7.1%	7.6%
Total	70	100.0%	106.1%

Qualitative results

Twenty two choir members volunteered to be interviewed individually. Fifteen ten-minute interviews with eleven women and four men were carried out over three of the four choirs. Three people who had put their names forward were absent on the day that the interviewers attended the choir sessions, and four volunteers from the fourth choir were omitted because of time and distance considerations and the amount of data already gathered. Telephone interviews were offered instead through the choir tutors, but none took up this offer. In addition, 18 responses to the “other” option in the benefits question (Question 4 of the survey form) and 33 comments written in the “any other comments” at the end of the survey were included as an extra source of data for qualitative analysis.

Practical factors

The qualitative information showed that a number of practical factors had contributed to the successful establishment of the choirs. Wide local promotion seemed to have been a factor, as most interviewees reported seeing a notice in their local paper, having a flyer delivered to their letter box, receiving an email, or hearing about the choir by word of mouth. Many of those who belonged had been in some kind of singing or music group previously, and the possibility of taking up this activity again had rekindled their interest. Some had recent experience in a group that had lost its venue as a result of the earthquake. However, the choir had also attracted people with no previous interest in or experience of singing who had been looking for a new or replacement activity post-earthquake, or had been brought along by a partner or friend. The convenience of the timing (during the day) and the venues in a variety of areas across Christchurch outside the central city, were also mentioned by many as a reason that they had decided to attend. Overall, it seemed that the choirs came along

in the right place at the right time. While these were all reasons for starting to attend the choir, it was clear that some other benefit apart from practical considerations had been able to sustain their interest as almost all interviewees had been attending for a considerable period, some of them since the choirs' inception. Three major themes were identified : the uplift in wellbeing from the singing itself; the benefit of social contacts; and the excitement of being challenged to learn new skills.

The uplifting experience of singing

The interdependence here of the physical, mental, and emotional aspects of wellbeing as set out in the biopsychosocial model of health (Engel 1977) was well illustrated in the way the participants described how they felt about their choir experience. All but two of the interviewees commented directly on how much they loved the singing or remarked on the mental and emotional uplift that came from singing in the choir. It was described as “*sheer joy*” (Mrs M) and an emotional release by several. Others used words such as “fun”, “relaxing” and said that they felt happy when they sang. Mrs E. had noticed people, including herself, were more joyful, happy and that there was a great release of emotions at the group gathering. Part of this was the supportive and uncritical environment created by the tutors so that both experienced singers and those who were new to singing felt safe and comfortable. Mrs L noted that she had been “*amazed to step outside her comfort zone*” and find her voice, and that it had been a very emotional experience for her. Mrs N, who has been coming along with her elderly mother from the beginning, reported that they both “*love it*”, especially the feeling of happiness she gets when the harmonies and the sounds all “*come together*”.

Other anonymous comments from the survey participants were consistent with those who were interviewed:

This is a wonderful resource. I find the singing uplifting. It really feels like a supportive and caring extended family.

Was dragged into coming by my husband but now I love it. My voice has improved and I have more confidence in singing

The choir has rejuvenated my interest in singing and music; all are encouraging and supportive to each other

A minority of people also reported physical benefits, including improved sleeping, improved lung function, and in one case, a strengthened voice which enabled Mrs O to communicate more easily with her deaf husband. These findings are very much the same as those found by Clift and Hancox (2001). Although the populations in these two studies were very different geographically and demographically - a British university student choral group in the one and a group of New Zealand older people in the other - the benefits reported were very much the same. There was also the same division of large proportions reporting enthusiastically on the mental and emotional benefits including increased confidence and reduced stress, along with a smaller number also reporting physical improvements.

Building social connectedness

All fifteen interviewees and many of the survey respondents commented on the social contact that they had developed through participating in the choir. New friends had been made, acquaintances deepened, and old contacts re-established. Mrs A noted that she had been able to reconnect with people in her own community, and now had a set of “choir friends”. Mrs D who was “*normally a shy person*” had “*come out of her shell*” through taking the opportunity of belonging to the choir. Mrs J, who had previously had singing lessons and been in choirs had at first been dubious about joining an “*old people’s group*” but found it was “*not that like that and everyone was lively minded and talented.*” Mrs E spoke about enjoying the socialising and the opportunity to meet other people. She noted that the choir “*brings people together and each one brings something special.*” Mrs L lives on her own and finds it a good social outlet, so much so that she has put off an operation on her foot because she doesn’t want to miss an upcoming concert. The choir had also provided a social network and an opportunity for both Mrs A and Mr F to have time away from their heavy responsibilities caring for dependent or unwell relatives all the rest of the week. The choir is an enjoyable activity and a social outlet which gives them their only break away from home, contact with other people and keeps them “*grounded*” (Mrs A). Many spoke of the support and encouragement they get from other choir members. The opening and closing rounds where choir members share something of interest, though not necessarily personal, also seem to encourage connectedness and perhaps provide a talking point for starting conversations during the social break in mid-session.

A selection of the notes made on the “any other comments” section of the questionnaires are consistent with what the interviewees reported:

This has become a significant activity which has a strong positive effect on my enjoyment and community involvement

Although the Sumner group is quite small ... it is great from a support group perspective... it has developed a lovely feel to it and members are very respectful and supportive of each other

I was made redundant at Christmas and belonging to this choir has been good for meeting new people – social contact, a set structure in my week, and keeping my brain active.

I look forward to the choir day, the singing, mixing with like-minded people and the buzz at the end of a session.

For some people, the choir experience was important enough to travel a long way out of their district. Various participants reported travelling from as far away as Springston, Lincoln, and Oxford.

Meaningful achievement

The data gathered on the benefits of being challenged and gaining increased skills and confidence was an important new area that had not been anticipated by the

questionnaire and was brought out strongly in the interviews, demonstrating the benefit of qualitative methods in exploring areas beyond the survey. The number of participants who mentioned the satisfaction and meaning they had gained from mastering a new challenge demonstrated both the control-enhancing experience the choir had been (Rodin 1986) and the dimension of *eudaimonia* (Berridge and Kringelbach 2011; Kimieck 2011) that is emerging as a core component of health promotion. For example, although in the survey a number noted that learning songs in other languages was a difficulty – which might have been interpreted as a negative aspect of the choir. For those interviewed, however, it was overwhelmingly seen in a positive light. Mrs B found it was “...good for her to get her voice going and though it [is] a challenge, especially learning songs from another language, ... it is good to keep learning.” Mr H, Mrs A, Mrs C, and Mrs D all noted how much they enjoyed the challenge of learning songs in a style of music or in other languages which they would not have previously imagined they could master. Mrs C had sung before but felt this choir had broadened her singing, built confidence and extended her abilities so that she could now sing in harmony. Many remarked on their increased confidence and some said that it had improved their sense of self-worth. Two participants had found their severe anxiety problems had reduced through finding they could develop new skills and form new social contacts.

Open comments on the survey also reflected this feeling:

Challenging, difficult at times but thoroughly enjoyable and a huge learning curve

Bit of a challenge sometimes – must be good for me

This is the best thing that has happened to me... I have sung solo in two concerts which I would never do before – they[the tutors] both gave me confidence

A very big part of this class is getting my brain to do something challenging – a big bonus

Wish my short term memory was better but this music is a good stimulus

Choir participation as a restoration and healing

The choir had also clearly been a significant influence on helping people after the earthquake as well as those coping with other difficult circumstances. Around half of the interviewees referred directly to the earthquake and how helpful they had found the choir experience as a means of restoration and healing. For Mrs E and Mrs J who were used to singing regularly, the Rockers of Ages choirs replaced their previous groups and networks that had been disrupted by the earthquake and were sadly missed and so helped them get back to normality. For others the benefit appeared to be from the experience as a whole – the uplifting effect of singing, new challenges and new social contacts and “*something positive for me after all the earthquakes*” (Mrs I). Mrs D had found that singing “*stops [me] dwelling on bits life has in store, particularly the earthquakes*”. After the earthquake, Mr G “*lost the will to get out of bed in the morning ... and no longer wanted to go anywhere*” but attending the choir now gave him a reason to get up. He has increased confidence, loves the music and the

supportive environment. Mrs O “*had a really bad time in the earthquake, was anxious and going to counselling*”. At the suggestion of a counsellor she looked for a new activity. She was hesitant about coming along but when she walked in, she “*saw 30 happy faces*”. She knew she had done the right thing and has “*never looked back*”. She is looking forward with satisfaction to inviting her family along to a choir concert and feels that they will be amazed at what she is doing. Mrs I found the choir to be “*something positive for me after all the earthquakes*”.

A number of those who added additional comments on the survey questionnaire also commented directly on the earthquake:

I feel this is the most beneficial post-earthquake experience – by that I mean of all the post quake “helping things”, this is by far the best for me.

I was feeling quite distressed and anxious after the earthquake and now feel so much better and alive

Singing is great for uplifting my spirits especially since this earthquake

Others who were dealing with grief and terminal illness also found the choir a means of healing and solace. Mrs B, for example, had a very old friend who was terminally ill and for whom she was the only supporter. She was wondering how she could make her friend’s last month better when “out of the blue” she received a pamphlet in the mail about the Rockers of Ages choir. Her friend was able to attend for one term and participate in one concert before she became too ill to continue. Being part of the choir “*vastly improved her [the friend’s] last months*” and now Mrs B continues to come. She has a genuine love of singing and enjoys the fellowship, and having fun.

For all these people, the choir had turned out to be an external trigger that had enabled them reach into themselves for the “... energy that comes from within the human spirit” (Richardson 2002, p. 319) and allowed them to grow more resilient so as to deal with the adversity and disruption of the earthquakes or other difficult life circumstances.

The critical role of the tutors

It was clear both from the interviews and the comments on the open section of the questionnaire that the role played by the tutors was critical to the success of the Rockers of Ages initiative. The expertise of the tutors in being able to draw out the best from a wide range of people was demonstrated by the range of unsolicited comments that arose in the interviews: “Excellent tutors” (Mrs A); “tolerant choir director” (Mrs C); “talented” (Mrs D); “great tutors”(Mr G); “essential” (Mrs J); “very gentle and fun” (Mrs L); “a tremendous sensitivity for people” (Mrs M).

Anonymous comments on the questionnaire described both tutors as

Brilliant teachers and coordinators; really enjoy and appreciate their inclusive, relaxed, professional approach”

[Their] way is so impressive and I have been surprised

Superb teaching and talent – a unique privilege to be part of this. Thanks!

Conclusions and recommendations

The Rockers of Ages project had been successful in meeting its initial modest aim of providing an enjoyable activity in a non-threatening supportive environment that would lift people's spirits and give them something positive to focus on. Four choirs had been established and were flourishing with stable membership and engaged participants one year after inception. The choirs had attracted a significant amount of volunteer support from the communities involved as well as from Community & Public Health, and this had undoubtedly helped the choirs become established. The project was well timed and well targeted and had clearly reached the age demographic and the earthquake affected groups that it had originally aimed to through good local promotions, suitable times and venues. The gender and ethnicity distribution of the 69 respondents who completed the survey was approximately the same, as far as could be determined, as the overall membership, that is, predominantly female, and almost entirely New Zealand European. While this could be interpreted as failing to attract a balance of men to women, or of other ethnic groups, the project had not aimed to do this and overall, the members could be considered to be a relatively disadvantaged and vulnerable group.

The evaluation showed a very high level of enjoyment of the choir activities, both the singing and the social contact. Though it was clear that the singing was the primary attraction, the social contact was a resulting benefit that added to the total experience. It was noteworthy that although no survey respondents rated the social contact as the most important aspect, almost half felt that it was the entire "package" that made the experience enjoyable. The comments made by the interviewees were entirely consistent with the survey and with the international background theory and literature. Both pleasure (hedonia) and the meaningfulness of achieving a new skill (eudaimonia) were incorporated in the general positive wellbeing that attending the choir appeared to have created. Themes of spontaneous enjoyment and emotional uplift, as well as a sense of achievement and confidence were mentioned many times. The increase in networks of friends and contacts was also reported by most, people with whom individuals were building shared experiences in an activity they all enjoyed. Some of these had been extended outside the choir itself, for example, with shared arrangements for transport. The choir was also clearly promoting coping and resilience in a number of the participants who had been badly affected by the earthquake, or by other life events that threatened to overwhelm them.

The critical role of professional tutors in making the project a success should not be under-estimated. It is doubtful whether the results outlined above could have been achieved without the two experienced and skilled tutors. They appeared to have successfully engaged participants at all levels of prior experience, chosen appealing music within the reach of the majority of participants but which provided enough stimulation and challenge for the more adept, and to have created a friendly, caring environment where participants felt safe. The balance between social contact and

working on the music also appeared to be just right in allowing the choir to progress meaningfully, while providing enough opportunity to relax and chat over a short refreshment break. Cohen et al (2006) in their study also saw that such cultural programmes should be “professionally conducted” in order to achieve success. Attracting a professional leader however, requires having a paid tutor, and this is the aspect which makes the project most vulnerable to being unable to continue if funding is no longer available. It seems unlikely that participants could themselves fund the tutor or that without a paid tutor (or tutors) that the choirs could become self-sustaining financially through voluntary services or donations and still achieve the same success.

Limitations

This study had a number of obvious limitations. The results are based on self-report from participants who are a self-selected group and may not necessarily be the most disadvantaged from their respective communities. The choirs were set up as a response after the Christchurch earthquake of February 2011 and there was no consideration of an evaluation at the time of their inception. There was therefore no baseline survey of general wellbeing or social connectedness that could be compared with the same measurement a year later to show any change. There was also no comparison group, though it is unlikely that even if this had been considered, it would have been ethical under the post-earthquake conditions to offer a health promoting intervention to one group and no intervention to another. There were also some factors that may have introduced bias by encouraging the participants to avoid any negative comments. Firstly, the participants were likely to have been aware that the survey may be used to support an application for future funding. Secondly, the interviewers, although not known to the choir participants or directors, were introduced as employees of Community & Public Health, one of the organisations that had been involved in promoting and supporting the choir.

It should also be noted that participative singing is not necessarily something that would suit everyone. It would seem likely that the range of benefits from singing will therefore always be limited to those who are interested and keen to participate. Well-led, sustained involvement in professionally led cultural programmes in other areas, however, may offer some of the same benefits. Even if these may lack the benefits to respiratory health that may accrue from singing, there is no reason to suppose that they could not provide the important aspects of social connectedness and “individual mastery” (Cohen 2006, p. 732) of a skill, the aspect that proved so important to the participants in this study. Hacking et al (2006) have noted for example, that participatory projects in drawing, painting, writing, and photography were all likely to improve self esteem, quality of life and a sense of personal growth for participants.

To conclude, the health promoting benefits of the Rockers of Ages Choirs seem clear and have added to the growing body of evidence in the field. The theoretical basis for supporting projects of this nature is strong, and the results speak for themselves. As Cohen et al (2006) notes, many people find the arts naturally appealing and rewarding, which tends to make attendance consistent. Such programmes are relatively easy to set up, are accessible to communities in most areas, and the health benefits are an added bonus. The most vulnerable aspect is the need for a paid,

professional tutor. This makes the future sustainability of the choir initiative fragile, as without an external source it is likely this worthwhile project could not continue. As Hacking et al (2006) commented, arts programmes generally get by with low levels of staff funding, with much reliance on dedicated staff and volunteers. It would be a great pity for this worthwhile project, which is clearly enhancing the wellbeing of a needy section of the community in Christchurch to founder for lack of this support.

The following recommendations are made from the evaluation:

- This report on the success of the project should be distributed to all organisations involved to affirm the value of their support.
- The report should also be made available to the participants in the study
- Community and Public Health can have confidence that the project is a worthwhile avenue for supporting and promoting wellbeing among community- living older people. There may be opportunities for further publicity such as provided through CTV.
- This report may be used to support applications for further funding for the choir tutors
- The writing of an academic paper on the initiative for submitting to a health promotion journal would be warranted.

References

- Berridge, K.C., Kringlebach, M.L. 2011. Building a neuroscience of pleasure and wellbeing. *Psychology of Wellbeing* 1(1), 1-29.
- Bonhila, A.G., Onofre, F., Vieira, M.L., Prado, M.Y., Martinez, J.A. 2009. Effects of singing classes on pulmonary function and quality of life of COPD patients. *International Journal of Chronic Obstructive Pulmonary Disease* 4, 1-8.
- Bygren, L.O., Konlaan, B.B., Johansson, S-E. 1996. Attendance at cultural events, reading books or periodicals, and making music or singing in a choir as determinants for survival: Swedish interview survey of living conditions. *BMJ* 313 (7072), 1577-1580.
- Chang, K. (2010). Community cohesion after a natural disaster: insights from a Carlisle flood. *Disasters* 34(2), 289-302.
- Clift, S.M., Hancox, G. 2001. The perceived benefits of singing: findings from preliminary surveys of a university college choral society. *Journal of the Royal Society for the Promotion of Health*. 121(4), 248-256.
- Cohen, G.D., Perlstein, S., Chaplione, J., Kelly, J., Firth, K.M, Simmens, S. 2006. The impact of professionally conducted cultural programs on the physical health, mental health, and social functioning of older adults. *Gerontologist* 46(6), 726-734.

Connor, K.M., Davidson, J.R. 2003. Development of a new resilience scale: the Connor-Davidson Resilience Scale (CD-RISC). *Depression and Anxiety* 18(2), 76-82.

Di Benedetto, P., Cavazzon, M., Mondolo, F., Rugiu, G., Peratoner, A., Biasutti, E. 2009. Voice and choral singing treatment: a new approach for speech and voice disorders in Parkinson's Disease. *European Journal of Physical and Rehabilitation Medicine* 45(1), 13-19.

Eades, G., O'Connor, M. 2008. Sounds Lively! Choirs: introducing singing into healthcare. *Journal of the Royal Society for the Promotion of Health* 128(2), 60-61.

Eley, R., Gordon, D. 2010. Didgeridoo playing and singing to support asthma management in Aboriginal Australians. *Journal of Rural Health*. 26(1), 100-4.

Engel, G.L. 1977. The need for a new medical model: a challenge for biomedicine. *Science* 196(4286), 129-136.

Fogg, L., Talmage, A., Purdy, S.C. Undated. Community choirs for people with brain disease: social singing or potential therapy. Auckland: University of Auckland Centre for Brain Research.

Freeman, E. E., Gange, S. J., Munoz, B., & West, S. K. (2006). Driving status and risk of entry into long-term care in older adults. *American Journal of Public Health*, 96(7), 1254-1259.

Gick, M.L. 2011. Singing, health and wellbeing: a health psychologist's review. *Psychomusicology: Music, Mind and Brain*. 21(1-2), 1-32.

Giles, L. C., Glonek, G. F. V., Luszcz, M. A., & Andrews, G. R. (2005). Effect of social networks on 10 year survival in very old Australians: the Australian longitudinal study of aging. *Journal of Epidemiology and Community Health*, 59(7), 574-579.

Grape, C., Wikstrom, B.M., Ekman, R., Hasson, D., Theorell, T. 2010. Comparison between choir singing and group discussion in irritable bowel syndrome patients over one year. Saliva testosterone increases in new choir singers. *Psychotherapy and Psychosomatics* 79(3), 196-198.

Greaves, C.J. Farbus, L. 2006. Effects of creative and social activity on the health and well-being of socially isolated older people: outcomes from a multi-method observational study. *Journal of the Royal Society for the Promotion of Health* 126(3), 134-142.

Green, J., and Thorogood, N. 2009. *Qualitative methods for health research*. Thousand Oaks, CA.: Sage.

- Griffen, J. A., Rapport, L. J., Bryer, R. C., & Scott, C. A. (2009). Driving status and community integration after stroke. *Topics in Stroke Rehabilitation*, 16(3), 212-221.
- Gotell, E., Brown, S., Ekman, S.L. 2009. The influence of caregiver singing and background music on vocally expressed emotions and moods in dementia care: a qualitative analysis. *International Journal of Nursing Studies* 46(4), 422-430.
- Hacking, S., Secker, J., Kent, L., Shenton, J., Spandler, H. 2006. Mental health and arts participation: the state of the art in England. *Journal of the Royal Society for the Promotion of Health* 126(3), 121-127.
- Hammar, L.M., Emami, A., Gotell, E., Engstrom, G. 2011. The impact of caregivers' singing on expressions of emotion and resistance during morning care situations in persons with dementia: an intervention in dementia care. *Journal of Clinical Nursing* 20(7-8), 969-978.
- Hammerman-Rozenberg, R., Maaravi, Y., Cohen, A., & Stessman, J. (2005). Working late: the impact of work after 70 on longevity, health and function. *Aging-Clinical & Experimental Research*, 17(6), 508-513.
- Harris, A. H., & Thoresen, C. E. (2005). Volunteering is associated with delayed mortality in older people: analysis of the longitudinal study of aging. *Journal of Health Psychology*, 10(6), 739-752.
- Harvey, R., Smith, M., Abraham, N., Hood, S., Tannenbaum, D. 2007. The Hurricane Choir: remote mental health monitoring of participants in a community-based intervention in the post-Katrina period. *Journal of Health Care for the Poor and Underserved*. 18, (2), 356-361.
- Irons, J.Y., Kenny, D.T., Chang, A.B. 2010. Singing for children and adults with cystic fibrosis. *Cochrane Database of Systematic Reviews* CD008036.
- Jacob, B., Mawson, A.R., Payton, M., Guignard, J.C. (2008). Disaster mythology and fact: Hurricane Katrina and social attachment. *Public Health Reports* 123(5), 555-566.
- Kenny, D.T., Faunce, G. 2004. The impact of group singing on mood, coping, and perceived pain in chronic pain patients attending a multidisciplinary pain clinic. *Journal of Music Therapy* 41(3), 241-258.
- Kimiecik, J. 2011. Exploring the promise of eudaimonic well-being within the practice of health promotion: the "how" is as important as the "what". *Journal of Happiness Studies* 12(5), 769-792.
- Manton, K. G., & Gu, X. (2001). Changes in the prevalence of chronic disability in the United States black and nonblack population above age 65 from 1982 to 1999. *Proceedings of the National Academy of Sciences*, 98, 6354-6359.
- Ministry of Health (2006). *Older People's Health Chart Book 2006. Public Health Intelligence Monitoring Report No. 12*. Wellington: Ministry of Health. Available:

<http://www.health.govt.nz/publication/older-peoples-health-chart-book-2006>

Accessed 28.6.12.

Mor, V. (2005). The compression of morbidity hypothesis: a review of research and prospects for the future. *Journal of the American Geriatrics Society*, 53, S307-S309.

Ojay, A., Ernst, E. 2000. Can singing exercises reduce snoring? A pilot study. *Complementary Therapies in Medicine*. 8(3) 151-6.

Norris, F., Stevens, S., Pfefferbaum, B., Wyche, K., Pfefferbaum, R. 2008. Community resilience as a metaphor, theory, set of capacities and strategy for disaster readiness. *American Journal of Community Psychology* 41(1-2), 127-150.

Patterson, O., Weil, F., Patel, K. (2010). The role of community in disaster response: conceptual models. *Population Research and Policy* 29(2), 127-141

Richardson, G.E. 2002. The metatheory of resilience and resiliency. *Journal of Clinical Psychology* 58(3), 307-321.

Robb, C., Small, B., & Haley, W. E. (2008). Gender differences in coping with functional disability in older married couples: the role of personality and social resources. *Aging & Mental Health*, 12(4), 423-433.

Rodin, J. 1986. Aging and health: effects of the sense of control. *Science* 233(4770), 1271-1276.

Sarma, S., Hawley, G., & Basu, K. (2009). Transitions in living arrangements of Canadian seniors: findings from the NPHS longitudinal data. *Social Science & Medicine*, 68(6), 1106-1113.

Skingley, A., Clift, S.M., Coulton, S.P., Rodriguez, J. 2011. The effectiveness and cost-effectiveness of a participative community singing programme as a health promotion initiative for older people: protocol for a randomised controlled trial. *BMC Public Health* 11, 142.

Skingley, A., Vella-Burrows, T. 2010. Therapeutic effects of music and singing for older people. *Nursing Standard* 24(19), 35-41.

Tamplin, J. 2008. A pilot study into the effect of vocal exercises and singing on dysarthric speech. *Neurorehabilitation*. 23(3), 207-16.

Yeh, S. C., & Liu, Y. Y. (2003). Influence of social support on cognitive function in the elderly. *BMC Health Services Research*, 3, 9.