

Sidney De Haan 
Research Centre for Arts and Health

Choral Singing, Wellbeing and Health:

*Summary of Findings from a
Cross-national Survey*

*Stephen Clift, Grenville Hancox, Ian Morrison,
Bärbel Hess, Don Stewart and Gunter Kreutz*



Sidney De Haan Research Centre for Arts and Health

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Current objectives include:

- Undertaking scientific research and evaluation on the potential benefits for wellbeing and health of active engagement in music making.
- Documenting and providing the research evidence base for establishing 'Singing on Prescription' for its wellbeing and health benefits
- Working in partnership with health and social care agencies and service users in the South East of England to promote the role of music and arts in healthcare and health promotion
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The Silver Singers, The Sage Gateshead

Introduction

Recent qualitative studies on the benefits of community singing have shown that diverse samples of singers report a range of social, psychological, and health benefits associated with singing. Bailey and Davidson (2005) for example, interviewed members of small choirs set up in Canada with homeless men and people in an economically disadvantaged community; Silber (2005) explored the impact of a singing group established in a female prison in Israel, and Watanabe (2005) explored the experience of individual engagement with Karaoke lessons and performance in Japan. These findings are supported by surveys in which choral singers have been asked to respond to a range of statements about the effects of singing. Beck, Cesario, Yousefi and Enamoto (2000), report that 67% of semi-professional choral singers in their survey agreed or strongly agreed that 'Singing has contributed to my personal well-being', and Clift and Hancox (2001) report that 71% of singers in a university choral society agreed or strongly agreed that singing was beneficial for their 'mental wellbeing'.

Research has also assessed the impact of singing on physiological variables assumed to have well-being and health implications. Several studies, for example, have assayed levels of immunoglobulin A in saliva taken from participants before and after singing, and reported significant increases, pointing to enhanced immune system activity (e.g. Beck et al., 2000; Kuhn, 2002; Kreutz, Bongard, Rohrmann, Grebe, Bastian and Hodapp, 2004).

Two quasi-experimental studies have reported positive health impacts from group singing for elderly people using standardised measures and objective indicators of wellbeing and health. Houston, McKee, Carroll and Marsh (1998) report improvements in levels of anxiety and depression in nursing home residents, following a four-week programme of singing, and Cohen, Perlstein, Chapline, Kelly, Firth and Simmens (2006) found improvements in both mental and physical health in a group of elderly people participating in a community choir for one year.

The existing research literature has substantial limitations. Many of the studies are small-scale and

essentially exploratory and only one study has independently replicated a previous investigation (Kreutz et al., 2004). The main shortcomings are the lack of a common conceptual understanding of wellbeing and health, and the absence of a theoretical model of the causal mechanisms linking singing with wellbeing and health.

Aim of the study

The present study aims to investigate the perceived benefits of choral singing through a large-scale cross-national survey assessing choral singers' perceptions of the effects of singing in England, Germany and Australia. The study is based on the World Health Organization's definition of health (WHO, 1946) as 'a state of complete physical, mental and social wellbeing and not merely an absence of illness or infirmity' and uses a cross-nationally validated quality of life instrument developed by the WHO Quality of Life project (Power, Harper, Bullinger and the World Health Organization Quality of Life Group, 1999) (the WHOQOL-BREF).

Method

Participating choral societies and choirs

The sample consisted of 1124 choral singers drawn from 21 choral societies and choirs in England (N = 633), Germany (N = 325) and Australia (N = 166). The figure below lists the principal choirs involved. In England, a sample of choristers involved in the Silver Song Club project also participated. The overall response rate was 61 per cent.

Most of the choirs in the survey sing major choral works from the Western Classical repertoire from the 15th to 20th Centuries. Some choirs sing a more eclectic repertoire including well known songs from musical shows and films.

Only six of the 21 choirs are auditioned and the remainder are open.

Many choirs have been established a long time. The Stuttgarter Liederkrans in Germany is the oldest choir in the survey, founded in 1824,

followed by the English Ashford Choral Society founded in 1857, and The Queensland Choir in Australia set up in 1872. Societies that have continued in existence for this length of time indicate their appeal over three centuries! There are also some recently established choral societies and choirs in the study, the German Ensemble ad libitum Stuttgart was formed in 2002, and The Silver Singers, Gateshead, England and The Esplanados, Brisbane, Australia were set up in 2005.

England

Ashford Choral Society

Canterbury Choral Society

Canterbury Christ Church University Cantata

Canterbury Christ Church University Choral Society

Choristers in the Silver Song Club Project

Faversham Choral Society

Folkestone Choral Society

The Silver Singers, Gateshead

Whitstable Choral Society

Germany

Ensemble ad libitum Stuttgart

Chor der Universitaet Hohenheim

Kammerchor Leinfelden-Echterdingen

Rondo Cantabile Nufringen

S'Choerle Poppenweiler

Chor Semiseria Tuebingen

Chor der St Georgs Kirche Schwieberdingen

Stuttgarter Liederkranz

Australia

Brisbane Chamber Choir

Brisbane Chorale

Esplanados

The Queensland Choir

Redcliffe Community Choir

The questionnaire

The questionnaire included 3 open questions on the effects of singing on quality of life, wellbeing and health, followed by 24 statements about choral singing based on instruments developed by Clift and Hancox, (2001) and Beck et al., (2000). Participants also completed the WHOQOL-BREF, which measures four dimensions of life quality: physical (e.g. How much do you need medical treatment to function in your daily life?), psychological (e.g. How much do you enjoy life?), social (e.g. How satisfied are you with the support you get from your friends?) and environmental (e.g. How satisfied are you with the conditions of your living place?) with high levels of reliability and validity (e.g. Skevington, Lofty and O'Connell, 2004; Hawthorne, Herrman and Murphy, 2006). Questionnaires were distributed to members of participating choirs during May 2007 for completion at home and return in a sealed envelope.

Findings

Over a thousand choristers chose to participate in this survey, representing just over 60% of the total membership of all the choirs.

The following table gives information about the singers who participated:

Choral singers tended to be well-educated (over half have experienced Higher Education, and around a quarter Further Education). Many choir members are in retirement and there are between two to three times as many women as men.

Choristers have continued in their interest in singing on average for 25 years, and have been loyal members of their present choir for an average of six years – and many for considerably longer. Around 40 percent are also members of another choir, which underlines their commitment to singing.

The participants

	England	Australia	Germany
Sample size	633	163	325
Percentage of women	77	67	66
Average age	61	52	54
Years involved in choral singing	27	25	26
Percentage who have had singing lessons	35	71	41
Percentage who can sight sing quite well or very well	68	86	64
Percentage who can play a musical instrument	55	72	71

What choristers say about choral singing

The questionnaire included a series of statements about the possible effects of participating in choral singing on quality of life, wellbeing and health. Overwhelmingly, singers in the three countries tended to agree with positively worded statements and disagree with negative statements. The table below shows some examples:

What is striking is how similar the pattern of answers is in the three national samples.

Principal Components Analysis of the choral singing items identified a strong first component

with substantial loadings from 12 items (e.g. improved mood, enhanced quality of life, greater happiness, stress reduction, and emotional wellbeing). These items were used to construct a single measure of the perceived effects of singing on wellbeing (Cronbach alpha 0.9 for both sexes). A high mean score confirmed that a large majority of choristers agreed that singing has a positive impact on personal wellbeing. Individual differences were apparent, however, and women gave higher scores: men mean = 48.0, s.d. = 6.7; women mean = 50.1, s.d. = 6.7; $t = -4.58$, $p < 0.001$ (2-tailed).

	England	Australia	Germany
% agree or strongly agree			
Singing positively affects quality of life	94	98	92
Singing makes mood more positive	92	93	88
Singing is relaxing and helps deal with stress	87	88	79
Singing helps improve wellbeing	82	85	69
% disagree or strongly disagree			
Singing could damage wellbeing and health	94	83	98
Singing doesn't help general emotional wellbeing	89	90	82
Singing doesn't help put worries out of mind	75	74	56
Singing doesn't help physical health	58	55	62

What choristers say about their quality of life, wellbeing and health

Generally speaking, as the table below shows, self-assessed health is high in each of the three national samples, but there is also substantial variability, with a significant minority of respondents reporting less than satisfactory health. Long-term health problems were reported by approximately half of all participants. Not surprisingly, such problems were more common among older members of choirs.

The WHOQOL-BREF provides four measures of health related quality of life: physical health, psychological wellbeing, social wellbeing and

environmental wellbeing. These scales were significantly correlated with one another in each national sample.

On the WHO psychological scale, a majority of respondents scored well above the scale midpoint indicating good/excellent psychological wellbeing. Approximately 10 per cent of choristers, however, gave low scores, which could indicate mental health difficulties. Women scored slightly lower on this scale: men mean = 23.5, s.d. = 3.0; women mean = 23.1, s.d. = 3.0; $t = 2.07$, $p < 0.05$ (two-tailed).

	England	Australia	Germany
Percentage of choristers			
Rating quality of life as good or excellent	93	98	88
Satisfied or very satisfied with their health	75	81	80
Reporting long-term health problem(s)	54	51	37
Selected items from the WHOQOL-BREF			
Requiring little or no medical treatment (Physical)	80	79	86
Seldom/never have negative feelings (Psychological)	72	50	63
Satisfied with support from friends (Social)	87	82	76
Mostly enough money to meet needs (Environmental)	81	68	72

Effects of Singing Scale and Psychological Wellbeing

A significant correlation emerged between the effects of singing scale and WHO Psychological wellbeing for women ($r = 0.22$, $p < 0.001$), but not for men ($r = 0.06$, ns). This pattern was replicated independently in each national sample. The correlations for women are very low, however, and the effective lack of relationship in both sexes suggests that some choristers with low general psychological wellbeing nevertheless experience high levels of benefit from singing. To explore this idea further, scores on the WHO psychological scale and the effects of singing scale were divided into three groups (low, medium and high) and cross-tabulated.

Respondents in the lowest third on the psychological wellbeing scale, and the highest third on the effects of singing scale were considered of particular interest for understanding the impact of singing on wellbeing. Eighty-five people in the total sample fell into this category: 15 men and 69 women (1 respondent did not disclose their sex); 51 English, 19 German and 14 Australian.



What singers say about singing, wellbeing and health

The questionnaire included open questions on the effects of singing on quality of life, psychological and social wellbeing and physical health. This section gives examples of comments made by the 85 choristers who report low psychological wellbeing, but nevertheless report that singing has a high impact on their sense of wellbeing. Over half of the quotations given come from English choristers, reflecting the national composition of this sample.

Two-thirds of this group reported long-term problems with their health, and in answers to open questions, approximately one fifth gave information on significant challenges in their lives. For example:

Enduring mental health problems

I have had to stop working due to an on-going medical condition (bi-polar disorder). I have had several episodes of this. Requiring varying lengths of time spent in hospital, followed by months of time needing support for depression and lack of self-confidence. Being a member of this particular choir has lifted my self-esteem again and restored self-belief. (English Female 54)

I had a full time panic attack last week. Tried some swimming exercises, which made it worse, then sang in the car for half an hour. By the end my heart rate and breathing had returned to normal, neck and shoulders relaxed, stomach unknotted. Generally find it unwinds and relaxes me. Always feel 'looser' after rehearsals. (Australian Male, 38)

Significant family/relationship problems

As a carer of two relatives stricken with schizophrenia, I have suffered from reactive depression. (...) Having a pleasant start to the day knowing I shall meet like-minded people and enjoy music making, hopefully having a laugh along the way. Hearing the harmonies helps me forget family worries. (English Female 70)

Able to enjoy companionship and makes me feel I am able to do something. My husband is depressed and this helps me to 'keep going'. Lifts mood and helps to forget problems in life. (English Female 65)

Significant physical health issues/disability

It plays a significant part in my emotional health and wellbeing. I find music uplifting. When recovering from a major stroke, singing was one of the ways of lifting my spirits out of depression. (English Male, 65)

Severe insomnia. I wake up between 3 and 4am. Most of the time I can't go back to sleep or only shortly before I get up again. Consequently, I am extremely tired in the evenings and suffer mood swings. (German Female, 67)

Recent bereavement

My husband died 3 months ago so all the questions about negative feelings etc. are distorted by this fact. One of the greatest supports in my life at this difficult time is the [choir I belong to]. I think choral singing is fantastic for emotional health. (English Female, 64)

In today's world, choral singing offers people one outlet from stress and worry. It is an experience not to be missed, and has helped me through the recent loss of my daughter. (English Female, 59)

Accounts given by this group also suggested at least six generative mechanisms linking choral singing with wellbeing and health. A given mechanism may have more than one outcome for wellbeing, and two or more mechanisms may have a similar impact. The mechanisms are as follows:

Choral singing engenders happiness and raised spirits, which counteract feelings of sadness and depression:

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. (English Female, 52)

Singing improves my mood and my health. I have to be on guard constantly against my medical condition (anxiety and depression) (Australian Female, 49)

Singing involves focused concentration, which blocks preoccupation with sources of worry, helps relieve stress and promotes relaxation:

Singing in a choir puts troubles 'on hold', as concentrating on the music requires all one's attention. (English Female, 65)

It has great effects. It helps me to 'switch off' everyday concerns and also to concentrate. Result: I can relax. (German Female, 56)



St Georgs have performed music by Beethoven and songs by the Kings Singers



The Cantata Choir of Christ Church University following one its regular performances in Canterbury Cathedral

Singing involves deep controlled breathing, which can counteract anxiety and stress, and give a sense of fitness:

Deep breathing, essential for singing, is one method of helping with signs of anxiety and stress. (English Female, 70)

I think that you are kept fit by choral singing because you breathe correctly and you engage your whole body in the activity, like you do when practising yoga or when doing sports (walking for fitness) (German Female, 50)

Choral singing offers social support and friendship, which ameliorates feelings of isolation and loneliness, and provides a sense of wider 'community' and social inclusion:

The effect of singing with a group helps to make friends, so this has widened my horizons quite a bit, and gets me out and about more. The support you receive from other people helps in general wellbeing. (English Female, 78)

The 'community' aspect of choral singing is particularly significant. A choir is a community of singers drawn from all walks of life, coming together to make a unified impact. That teamwork and disciplined focus on a thing greater than ourselves (namely a choral work) is an example of how the world might/could be! (Australian Female, 66)

Choral singing involves education and learning, which keeps the mind active, gives a sense of achievement and counteracts decline of cognitive functions:

Apart from the relaxation benefits, I believe that for me, aged 57, keeping the brain active and having to concentrate for long periods will delay if not completely prevent senile dementia! (English Female, 57)

[Choral singing is] A very satisfying activity to be involved in at any age, but I think especially valuable to people in their later years when they have time on their hands. I think choral singing is a particularly valuable and worthwhile activity to fill some of this time and give a real sense of achievement at a time when one might be feeling one's usefulness is declining. (Australian Female, 60)

Choral singing involves a regular commitment to attend rehearsal, which motivates people to avoid being physically inactive, and provides a sense of balance to other pressures in life:

It makes me get up in the morning [rehearsals are during the day] and puts me in a good mood for the rest of the day and makes me more alert. (English Female, 65)

Choir singing is part of my life and its gives me the highest quality of life. It is a balance to the stress and hectic pace of professional life. When singing I can relax totally, I get peace, control my breathing and relax my tense muscles.) German Female, 67

Conclusions and Implications

This study contributes to a process of addressing the shortcomings of previous research by undertaking a large scale cross-national survey of singers in choirs in England, Germany and Australia, based on the WHO definition of health, and using a rigorously developed cross-national instrument for assessing health related quality of life, the WHOQOL-BREF.

It also contributes to a process of building an evidence base to support a case for greater public investment by local authorities and NHS Trusts in community music and singing provision in the interests of promoting wellbeing and health, especially from midlife onwards. Given that throughout the world, increased life expectancy has resulted in a continuing demographic shift towards larger proportions of elderly people in national populations, there is a need to look afresh at the opportunities available to help encourage people to remain physically, socially and mentally active post retirement. It is argued that singing is a valuable activity in all of these respects and deserves to be recognised as such by public sector commissioners.

The results confirm previous findings from Clift and Hancox (2001) and Beck et al. (2000) that a majority of choristers experience singing as beneficial for wellbeing. Nevertheless, there is variation in the extent to which singers endorse the idea that singing has benefits for their wellbeing, and an interesting finding is that such perceptions are gendered, with women more likely to report such benefits compared with men. Indeed, it is very clear that in the choirs participating in this study, women substantially outnumber men, and in the sub-sample that is the focus of the current paper, detailed comments on the value of singing for wellbeing and health, were more often given by women.

The findings from the WHOQOL-BREF also demonstrate that a large majority of singers rate their quality of life as good or better. However, a minority do give low scores, which indicates that

they are not satisfied with their quality of life and health. For the WHO psychological wellbeing scale, approximately 10% of the sample scored below the scale's midpoint suggesting that they may be coping with significant mental health challenges. A small gender difference emerges on this scale with women reporting lower average levels of wellbeing.

It is clear that perceptions of the benefits of singing are substantially independent of general psychological wellbeing as measured by the WHOQOL-BREF, and the accounts given by a subgroup of respondents with low general wellbeing who highly endorse the benefits of singing were examined. Many participants in this subgroup disclosed personal challenges in their lives that have compromised their sense of personal wellbeing. Nevertheless, it appears that participation in singing has been of considerable benefit to them. More importantly, from a theoretical point of view, the choristers' accounts provide valuable insights into a number of causal mechanisms linking singing with improved wellbeing and health.

The analysis of themes in the qualitative data reported here is preliminary and considers only a fraction of the available accounts provided by choristers. A fuller, more sophisticated analysis is in progress using the Maxqda2007 qualitative analysis software programme (www.maxqda.com). This analysis will allow for emergent themes to be organised into a more detailed model of mechanisms and beneficial impacts, and relate the information provided in response to open questions, to the structured data available from the rest of the questionnaire. In addition to this study is helping to highlight the wellbeing and health benefits associated with choral singing, it also has a number of implications for music education and further research.

It is clear that many participants in the study have had long experience of involvement in choral singing, and many have had singing lessons and can play an instrument. In addition, very few of the respondents were told as children that they could not sing. It is not difficult to imagine, therefore, that the ability of people in their later years to



derive benefits from group singing derives in considerable part from the skill and confidence that comes from a life-time involvement in music and singing. This suggests that if singing is to be a potential resource in later life that the early foundations are crucial, as are opportunities throughout early and mid-adulthood to engage in community singing. It is of interest in this respect that in both the Bailey and Davidson (2005) and Silber (2005) studies, in which special efforts were made to recruit disadvantaged adults into singing projects, those most ready to engage did have some background in music. The issue of having a good foundation in music and positive encouragement to sing appears to be particularly relevant for boys, as the results of this study underline the well-known pattern that men are less likely to be involved in choral singing than women.

Although this study strongly indicates the importance of a history of engagement in singing, this is not to say that adults with little or no previous experience of singing might not find it enjoyable and beneficial if they were to have the opportunity and encouragement to participate in their local communities. And indeed, there were members in the choirs studied with relatively little previous experience of choral singing. A further implication, therefore, is that more efforts are needed to expand community opportunities for involvement in singing, and to educate adults about the value of such engagement at a musical, personal and social level, and also for the benefits it can potentially bring for wellbeing and health.

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Further information

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Report 5

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