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Choral singing and psychological wellbeing:

Quantitative and qualitative findings from English choirs in a cross-national survey

ABSTRACT

Over 600 choral singers drawn from English choirs completed the WHOQOL-BREF questionnaire to measure physical, psychological, social and environmental wellbeing, and a twelve-item 'wellbeing and choral singing scale'. They also provided accounts of the effects of choral singing on quality of life,

KEYWORDS

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wellbeing and physical health in response to open questions. High average scores were found on all WHOQOL-BREF scales, and a high degree of consensus emerged on the positive benefits of choral singing. A significant sex difference was found on the choral singing scale, with women endorsing the wellbeing effects of singing more strongly than men. This finding replicates the earlier result reported by Clift & Hancox (2001) in a pilot study with a single choral society. Low correlations were found between the WHOQOL-BREF psychological wellbeing scale and perceptions of wellbeing associated with singing. However, examination of written accounts to open questions from participants with relatively low psychological wellbeing and strong perceptions of positive benefits associated with choral singing served to identify four categories of significant personal and health challenges. They also revealed six 'generative mechanisms' by which singing may impact on wellbeing and health.

INTRODUCTION

A recent systematic review (Clift, Hancox, Staricoff & Whitmore 2008) identified 35 research reports addressing connections between singing, wellbeing and health in non-clinical samples and contexts, published since the early 1960s. The literature is highly diverse theoretically and methodologically, and low levels of cross-citation indicate an academic field in an early stage of development. Nevertheless, a number of important findings have emerged from the more substantial studies undertaken to date.

A range of small scale qualitative studies using ethnographic, interview and focus group techniques with diverse samples have shown that singers commonly report a wide range of social, psychological, spiritual and health benefits associated with singing (e.g. Bailey & Davidson 2005; Silber 2005). These findings are supported by questionnaire surveys in which choral singers are asked to respond to a range of statements about the effects and benefits of singing. Beck, Cesario, Yousefi & Enamoto (2000), for example, report that 67% of semi-professional choral singers in their survey agreed or strongly agreed that 'Singing has contributed to my personal wellbeing'; Clift & Hancox (2001) report that 71% of singers in a university choral society agreed or strongly agreed that singing was beneficial for their 'mental wellbeing', and Hillman (2002) reports a significant perceived improvement in 'emotional wellbeing' among participants singing in a large community choir. A number of studies have also shown significant improvements in affective state after singing, using previously validated mood questionnaires (e.g. Kreutz, Bongard, Rohrmann, Grebe, Bastian & Hodapp 2004; Unwin, Kenny & Davis 2002).

On a more objective level, a range of studies has assessed the impact of singing on physiological variables assumed to have wellbeing 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 et al. 2004; Beck, Gottfried, Hall, Cisler & Bozeman 2006).

Few studies have employed standardised measures of wellbeing and health, or objective indicators of health status, in assessing the impact of active participation in singing. However, two quasi-experimental studies have reported positive health impacts from group singing for elderly people. Houston, McKee, Carroll & Marsh (1998) report significant reductions in assessed levels of anxiety and depression in nursing home residents using common standardised measures, following a four-week programme of singing, and Cohen, Perlstein, Chapline, Kelly, Firth & Simmens (2006) found significant improvements in both mental and physical health in a group of independent elderly people participating over one year in an especially established community choir.

Despite the interest of these studies empirically, many of them are small-scale and essentially exploratory and only one study has specifically built upon and independently replicated a previous study (Kreutz et al. 2004). Further major shortcomings in the literature are the lack of a common conceptual understanding of wellbeing and health, and the absence of a comprehensive theoretical framework that elucidates the key contextual factors and causally generative mechanisms through which singing can be beneficial for wellbeing and health (Harré 1972; Pawson & Tilley 1997).

The present study aims to address these shortcomings by building on the previous work of Clift & Hancox (2001) through a large-scale, cross-national survey assessing choral singers' perceptions of the effects of singing in England, Germany and Australia.

In the earlier study, a structured questionnaire was used to assess experiences and perceived benefits associated with choral singing. This was developed on the basis of an initial qualitative survey, which gathered written accounts in response to open-ended questions. Factor analysis of the structured questionnaire data produced a six-factor solution, with a substantial initial factor concerned with 'wellbeing and relaxation.' A scale based on this first factor had high internal consistency, and a statistically significant sex difference was found – with women indicating a stronger sense of wellbeing associated with singing than men. Surprisingly, no other study identified in the systematic review, that included both sexes, reported comparisons between responses of men and women. Two specific objectives of the current study were to devise a new scale based on the first factor identified by the Clift & Hancox study, and to determine whether the sex difference found in this study was confirmed in larger cross-national investigation.

In terms of grounding the study in an established framework for conceptualising and measuring health and wellbeing, it was considered appropriate to work on the basis of the World Health Organization's definition of health (WHO 1946), and the WHO Quality of Life project

(Power, Harper & Bullinger 1999). For the WHO, health is defined as follows: 'Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity' (WHO 1946). Quality of life is defined as: 'A person's perception of his/her position in life within the context of the culture and value systems in which they live, and in relation to their goals, expectations, standards, and concerns' (WHOQOL Group 1994).

The WHOQOL project has produced a range of validated quality of life instruments for use in cross-national research. The WHOQOL-BREF was developed for use in large-scale surveys to avoid too much demand on participants completing a lengthy questionnaire. A considerable body of research, in many different national contexts, has demonstrated high levels of factorial stability, internal consistency, reliability and discriminative validity. The WHOQOL-BREF was considered particularly appropriate for the current study as versions of the scale are available for use in the UK, Germany and Australia, and published data are available from previous studies with UK, German and Australian samples (see e.g. Skevington, Lofty & O'Connell 2004; Hawthorne, Herrman & Murphy 2006).

The present paper reports on findings from English choirs and choral societies participating in the study. A fuller account of the survey and findings from the three national groups can be found in Clift, Hancox, Morrison, Hess, Stewart & Kreutz (2008).

METHOD

Aim

To assess the relationships between perceived experiences and effects associated with choral singing and broader dimensions of health-related quality of life (as assessed by the WHOQOL-BREF) among singers in English choirs and choral societies.

Objectives

1. To develop a new scale to assess experienced wellbeing effects associated with choral singing.
2. To examine differences between men and women in their experiences of singing using this scale.
3. To further explore the value of choral singing for wellbeing, drawing on qualitative accounts gathered through written answers to open questions.

Procedure

Questionnaires were distributed to members of participating choirs at the start of rehearsals during May 2007 for completion at home and return in a sealed envelope at a subsequent rehearsal.

Questionnaire

The questionnaire contained three main sections.

Section 1 asked for personal data (e.g. sex, age, partnership status, employment) and experience of singing and music-making (e.g. time in the choir, ever auditioned, singing lessons).

Section 2 included three open questions on the effects of singing on quality of life, wellbeing and health, followed by a structured 24 item 'Effects of Choral Singing' questionnaire with a five-point 'agree-disagree' response format. The 24 statements on the effects of singing were based on instruments used in two previously published studies with choral societies. Clift & Hancox (2001) developed a questionnaire based on an initial detailed qualitative analysis of choral singers' views on the benefits of singing and impact on wellbeing and health. Analysis identified a substantial component concerned with 'well-being and relaxation'. The highest loading items on this component were selected for this survey instrument. Additional items were taken from the 'Singers' Emotional Experiences Scale' developed by Beck et al. (2000). All items used in the earlier studies were positively worded. To counteract possible response bias, half of the items included in the current survey instrument were positively worded, e.g.: 'I find singing helps me to relax and deal with the stresses of the day' and half were negatively worded e.g.: 'I wouldn't say that singing is an activity that has made me physically healthier'.

Section 3 contained the WHOQOL-BREF – the World Health Organization Quality of Life Questionnaire (short version). The WHOQOL-BREF consists of 24 questions answered on five-point scales, which serve to measure 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?).

Sample

The sample consisted of 591 choral singers drawn from eight choral societies and choirs in the South East and North East of England. Response rates by choir ranged from 50–70%. The sample was supplemented by a further 42 choral singers from across the South East of England acting as volunteers in the Silver Song Club Network (www.singforyourlife.org.uk), giving a sample of 633 choristers. See Figure 1 for an image of one of the participating choirs.

Analysis

Numerical data were analysed using SPSS PC+ Version 16. Given the finding of a significant sex difference in responses to choral singing found by Clift and Hancox, analyses were conducted separately

Figure 1: The Silver Singers, The Sage Gateshead: one of the choirs participating in the English arm of the survey. (Reproduced with the permission of The Sage Gateshead, Silver Singers.)

for men and women and for the total sample. Principal Components Analysis was used to analyse the structure of the choral singing items, resulting in a single perceived effects of choral singing scale. Pearson correlations were used to analyse the relationships between the singing scale and WHO measures. A preliminary qualitative analysis was undertaken with a small sub-sample of singers reporting high impact of singing on wellbeing, but low scores on the WHOQOL-BREF psychological wellbeing scale. Written answers to open questions on the questionnaire were analysed thematically to identify sources of challenge to wellbeing and potential mechanisms linking participation in singing with improved wellbeing and health.

RESULTS

The average age of choristers was relatively high (mean = 61 years), and women outnumbered men 3:1 (77% versus 23%).

The 24 effects of choral singing items were subject to Principal Components Analysis separately for males and females and for the total sample. A strong first component emerged with substantial loadings from twelve items for each sex group (see Table 1). The main themes defining this factor were: improved mood, enhanced quality of life, greater happiness, stress reduction, and emotional wellbeing. Substantially the same pattern was found for males and females analysed separately. These twelve items (eight positive and four negative) were

	Total sample	English Men	English Women
Helps make me a happier person	.76	.716	.78
Gives a positive attitude to life	.75	.74	.74
Helps improve wellbeing	.75	.68	.77
Releases negative feelings	.75	.74	.75
A lot happier afterwards	.74	.74	.73
Positively affects quality of life	.73	.66	.75
Mood more positive	.71	.68	.71
Doesn't give me a 'high'	–.71	–.71	–.71
Doesn't release negative feelings	–.70	–.72	–.68
Relaxing and helps with stress	.68	.61	.70
Doesn't help emotional wellbeing	–.68	–.69	–.68
No deep significance	–.65	–.65	–.65
Variance accounted for	51.4%	48.4%	51.9%

Pair-wise deletion: Total Sample = 604–616; Men, N = 136–139; Women, N = 468–477.

Table 1: Effects of choral singing items first principal component.

used to construct a single measure of the perceived effects of singing on wellbeing (Cronbach alpha 0.9 for both sexes). A large majority of choristers agreed or strongly agreed with the positive items, and disagreed or strongly disagreed with the negative items, so that while the scale has a potential range of 12 to 60, the actual range is from 27 to 60 with a mean of 49.7 and standard deviation of 6.8. The high scores on this scale confirm that a large majority of people singing in choral societies agree that the effects of singing are generally positive in terms of perceived enhancement of wellbeing. A significant sex difference was found, with women showing higher scores: men mean = 48.0, s.d. = 6.9; women mean = 50.2, s.d. = 6.7; $t = –3.39$, $p < 0.001$ (2-tailed). This finding replicates the earlier finding by Clift & Hancox (2001) in their initial study of a singing choral society.

The WHOQOL-BREF was scored in accordance with established procedures to give measures of physical, psychological, social and environmental quality of life. In line with previous research documenting satisfactory reliability and validity, Cronbach alpha values were very high for all scales, and mean scores on each scale were significantly lower for participants reporting 'long-term health problems' compared with those who did not (data not reported here – see Clift et al. 2008).

		Effects of singing			
		Low third	Mid third	High third	Total
Psychological wellbeing	Low third	90	57	58	205
	Mid third	78	51	70	199
	High third	34	56	83	173
	Total	202	164	211	577

Table 2: Cross tabulation of psychological wellbeing and effects of choral singing (English sample).

The focus of interest in this paper is on the psychological scale, which is made up of six items scored from 1–6. The scale has a range of 6–30, with a midpoint of 18. A majority of people in the total sample scored well above 18 indicating good to excellent psychological wellbeing, but approximately 10 per cent of respondents had low scores which could indicate borderline/mild mental health difficulties. Interestingly, women scored slightly lower on this scale when compared with men: men mean = 23.6, s.d. = 2.7; women mean = 23.0, s.d. = 2.9; $t = 2.13$, $p < 0.05$ (2-tailed).

Given the sex differences apparent for the effects of choral singing scale and the WHO psychological scale, correlations between the two measures were calculated for sexes separately. A significant correlation emerged for women ($r = 0.27$, $p < 0.01$), but not for men. These results suggest that women with higher levels of general psychological wellbeing are more likely to express benefits from singing, but that this is not the case for men. However, the correlation for women is very low, with a shared variance of just under 7 per cent and the effective lack of a relationship suggests that some people with relatively low general psychological wellbeing nevertheless experience high levels of perceived benefit from singing. The converse may also be the case.

In order to explore this further, scores on the psychological wellbeing and effects of singing scales were recoded into three groups at the 33rd and 67th percentiles and then cross-tabulated. This gave nine fairly evenly sized sub-groups (Table 2). 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 (N = 58, 48 women, 9 men, 1 sex not given). These participants essentially report a relatively low level of general psychological wellbeing as assessed by the WHOQOL-BREF, and yet report a strong wellbeing effect associated with their participation in choral singing. Their written accounts were examined for evidence of the factors which might explain their low level of wellbeing, and for

insights into the ways in which singing may influence wellbeing in a positive way for this group.

Health and personal issues within this group

The responses of this group to the open questions were examined to gain insights into their personal circumstances and the ways in which they accounted for the impact of singing on their wellbeing. From the information offered by this group, approximately one quarter stand out as having particular challenges in their lives. It should be born in mind that the questionnaire did not specifically ask participants to provide information on personal challenges in their lives, which could have a detrimental impact on their subjective wellbeing. The examples given below should therefore be understood as indicative of such challenges within this group rather than a definitive picture for the sub-sample. Such accounts are invaluable, however, for providing insights into the meaning of the quantitative data gathered, and for giving a concrete sense of a range of issues accounting for low psychological wellbeing scores.

Three people disclosed a history of mental health problems, and explained how singing helped in the process of recovery and sustaining a sense of mental wellbeing. The issues of self-esteem and self-belief are especially emphasised in the first example, and the second stresses the impact of singing on mood.

> 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.
>
> Female, 54

> Keeps me happy. Is an excellent hobby. Sociable activity. Need no special equipment – easy to carry voice around. I have clinical depression, so it <u>really</u> helps me (original emphasis).
>
> Female, 36

Three people were affected by significant family/relationship problems, which were clearly a source of significant demand on their personal resources, and affected their own sense of psychological wellbeing. In the following examples, the effects of singing on mood, and the distraction it provides are mentioned.

> As a carer of two relatives stricken with schizophrenia, 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.
>
> 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.
>
> Female, 65

Seven people reported being affected by significant physical health issues or disability, which in turn clearly impacted on their psychological wellbeing. The following accounts provide tangible examples of the interplay between body and mind – physical and mental wellbeing – and point to important ways in which the activity of singing can be beneficial in the processes of recovery and rehabilitation.

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

> Satisfies a love of music, improves social interaction. Recently gave me the opportunity to perform in New York's Carnegie Hall. Increased social life. Singing with 'Silver Song Group' is very satisfying i.e. helping people older or less fortunate than I to enjoy a slightly better quality of life if only for a couple of hours. I suffer from a lung problem and singing is a useful exercise.
>
> Male, 72 (chronic obstructive pulmonary disease, blood pressure, cholesterol and allergy/ sinus problems, all treated by medication)

Three people had been recently bereaved and this is, of course, to be expected given the high average age of participants in the sample. The sense of social and emotional support which membership of a choir, and other musical groups, can provide following the loss of a significant person is very tangibly expressed in the following accounts.

> 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 Silver Singers and the other silver activities – ukulele, guitar, ocarina/ tin whistle. I think choral singing is fantastic for emotional health.
>
> 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.
>
> Female, 59

Generative mechanisms linking singing with wellbeing

The accounts given by this group are also replete with intuitive hypotheses regarding generative mechanisms linking choral singing with wellbeing and health. A common thread running through these 'lay constructions' is the idea that various component elements of singing, and also being part of a singing group, exert a counteractive influence on factors potentially detrimental to wellbeing and health. Six commonly recurring proposed mechanisms are identified here with illustrative quotations.

Choral singing engenders happiness and raised spirits, which counteract feelings of sadness and depression. In the first example, the linkage is also made between experiences of happiness and health and wellbeing more broadly. The second account suggests that when singing 'you cannot be sad for long'; this highlights the process of counteraction at play in mood and emotional states.

> I am never happier than when I am singing. This can only have a positive effect on my health and wellbeing.
>
> Female, 69

> 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.
>
> Female, 52

Singing involves focused concentration, which blocks preoccupation with sources of worry. Singing is therefore a source of distraction from ongoing concerns, and participants commonly referred to being able to forget any troubles they had, at least for a short time, while singing.

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

> Imperative to my wellbeing. It lifts me out of ongoing stresses, and calls for attention to numerous details thereby absorbing me completely.
>
> Female, 54

Singing involves deep controlled breathing, which counteracts anxiety. It is obvious that singing as an activity is powered by the lungs, and promotes conscious awareness of depth and control of breathing. Breathing is also highly responsive to emotional states, and anxiety and stress can lead to rapid and shallow breathing, and relaxation can be induced by making an effort to breathe more deeply and slowly. The following respondents recognise the importance of this connection between breathing and emotion, and the second account is interesting in highlighting the use made of controlled breathing exercises in the control of anxiety in daily life.

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

> Lung capacity and stamina much greater. Made me use breathing exercises as a technique to reduce anxiety when in distressing situations.
>
> Female, 65 (with chronic back and leg pain due to a road traffic accident ten years ago)

Choral singing offers a sense of social support and friendship, which ameliorate feelings of isolation and loneliness. Just as singing is inherently dependent upon breathing, so membership of a group is intrinsic to choral singing, and group membership per se can be helpful in promoting a sense of wellbeing, as the following examples show.

> 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.
>
> Female, 78

> The choir has been a lifesaver for me. I live alone and have no family. I belong to two choirs and enjoy them both.
>
> Female, 69

Choral singing involves education and learning, which keeps the mind active and counteracts decline of cognitive functions. This factor is especially important given the high average age of the participants, and the following accounts highlight how significant singing can be in keeping 'the brain active'.

> I think it is good at this age, to learn and remember new words every week, keeping the brain active, in all, it gives you something to look forward to, and aim for, when everyone else thinks you're passed it! […] You feel that you're more than somebody's old Gran! It has a great effect, and it keeps you young, and to make the best of your appearance.
>
> Female, 68

> 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!
>
> Female, 57

Choral singing involves a regular commitment to attend rehearsal, which motivates people to avoid being physically inactive. The motivational

aspects of being a member of a group committed to practicing in order to achieve a good standard in performance are highlighted in the following accounts.

> Making the effort to attend choir practice on wet, cold evenings instead of watching TV must be better for health.
>
> Female, 69

> 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.
>
> Female, 65

DISCUSSION

A small number of previous studies have documented potential wellbeing and health benefits associated with group singing. These earlier studies are diverse and often small-scale and exploratory, with little consensus in theoretical perspectives and appropriate measures, and include only one example of a planned replication to validate previous findings (Kreutz et al. 2004).

This study contributes to a process of addressing these shortcomings 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 builds upon the earlier surveys of Clift & Hancox (2001) and Beck et al. (2000) in producing a simple and reliable measure of the perceived effects of choral singing on wellbeing. Choristers' perceptions of the effects of choral singing can therefore be examined in relation to a broader validated framework for the assessment of wellbeing in four dimensions.

In this paper an analysis of data from over 600 English choristers is presented. The results confirm previous findings from Clift & Hancox, (2001) and Beck et al. (2000) that a large majority of choristers perceive the experience of singing to be a positive and beneficial one. In itself this is not too surprising given that choral singing is a voluntary activity people undertake through a love of music and the pleasure they derive from it. Nevertheless, there is considerable variation in the extent to which singers endorse the idea that singing has benefits for their wellbeing and even health, and an interesting finding from the survey is that such perceptions are gendered, with women significantly more likely to report benefits compared with men. This difference, originally reported by Clift & Hancox (2001), has not been explored in any of the previous research on singing and wellbeing, even where samples have included both men and women. The finding may contribute to understanding why choral societies commonly have more female members than males, and should certainly be a focus for further research.

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 indicate that they are not satisfied with their quality of life. For the WHO psychological wellbeing scale, approximately 10 per cent of the sample scored below the scale's midpoint; this suggests that they may be coping with significant challenges to their mental wellbeing. A small gender difference emerges on this scale with women reporting lower average levels of wellbeing. This is in line with previous large-scale normative studies using the WHOQOL-BREF, which report significantly lower means for women compared with men on this scale (Skevington et al. 2004).

When choristers' perceptions of the effects of singing are examined in relation to the WHO psychological scale, a statistically significant correlation emerges for women only, but the value is very low with 7 per cent shared variance. For both sexes, therefore, the two scales show a high degree of independence. This is interesting because it implies, for instance, that some choristers with relatively low WHO scores are nevertheless strongly endorsing benefits from choral singing.

This was pursued by identifying those choristers in the bottom third of the WHO psychological score range, but with choral singing scale scores in the top third of the range (N = 58), and then examining the qualitative data gathered for insights into their personal health circumstances, and the ways in which they explained their experience of the positive impacts of choral singing.

At this point the results begin to come to life as many participants in this group disclosed personal challenges in their lives that have clearly compromised their general sense of wellbeing. Nevertheless, it is also clear that participation in singing has been of considerable benefit to them, in diverse ways, depending upon their particular circumstances and difficulties. More importantly, however, the choristers' accounts provide valuable insights into various generative mechanisms (Harré 1972) that can serve to promote a sense of wellbeing, by counteracting processes potentially detrimental to health.

This paper reports on a small fraction of the qualitative data gathered in this study, and further analysis will reveal whether the quantitative patterns and issues emerging from this preliminary analysis are found among choristers in German and Australian choirs too. A fuller, systematic analysis of the qualitative data is underway using the MAXQDA2007 software package for qualitative data analysis (see: http://www.maxqda.com/). Guided by a realist philosophical perspective, this analysis is focused towards constructing a grounded theory account of 'context-mechanism-outcome configurations' (Pawson & Tilley 1997), which can explain the power of singing in maintaining and promoting wellbeing and health, and provide a foundation for further research.

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