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**The perceived effects of singing on the health and wellbeing of wives and partners of members of the British Armed Forces: A cross-sectional survey**

Clift, S. BA PhD

Sidney De Haan Research Centre for Arts and Health, Canterbury Christ Church University, The Block, 69 Tontine Street, Folkestone, Kent CT20 1JR

[s.clift@btinternet.com](mailto:s.clift@btinternet.com)

Page, S. RGN BSc

Sidney De Haan Research Centre for Arts and Health, Canterbury Christ Church University, The Block, 69 Tontine Street, Folkestone, Kent CT20 1JR

[sonia.page@canterbury.ac.uk](mailto:sonia.page@canterbury.ac.uk)

Daykin, N. MSc PhD

Sidney De Haan Research Centre for Arts and Health, Canterbury Christ Church University, The Block, 69 Tontine Street, Folkestone, Kent CT20 1JR

[norma.daykin@winchester.ac.uk](mailto:norma.daykin@winchester.ac.uk)

Peasgood, E. BSc

Sidney De Haan Research Centre for Arts and Health, Canterbury Christ Church University, The Block, 69 Tontine Street, Folkestone, Kent CT20 1JR

[emily.peasgood@canterbury.ac.uk](mailto:emily.peasgood@canterbury.ac.uk)

This study was undertaken by the Sidney De Haan Research Centre for Arts and Health, Canterbury Christ Church University

Address for correspondence:

Professor Stephen Clift, Sidney De Haan Research Centre for Arts and Health, Canterbury Christ Church University, The Block, 69 Tontine Street, Folkestone, Kent CT20 1JR

Email [s.clift@btinternet.com](mailto:s.clift@btinternet.com)

Fax N/A

**Telephone: 07764 761 510**

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## **Abstract**

### *Objectives*

A survey to explore the extent to which a choir programme associated with the British Armed Forces provides benefits of wives and partners and families of military personnel.

### *Study design*

A cross-sectional survey.

### *Method*

Online self-completion questionnaires to survey 464 choir members and 173 committee members who were also participants in the choirs.

### *Results*

Large majorities of participants report personal and social benefits from their engagement in choirs, as well as benefits for their health and wellbeing. Challenges facing choirs were also identified associated with performance demands and inter-personal relationships within choirs.

### *Conclusions*

Group singing generates a range of personal, social and health benefits for wives and partners of armed services personnel. The study reveals some challenges arising in all female choirs in military settings and suggests potential areas for further research.

### **Keywords**

*Military lifestyle; singing; wellbeing*

## **Introduction**

Military lifestyle places demands and hardships on spouses and families. Long and unpredictable duty hours together with periodic redeployments and the risk of injury or death, can have an impact on the psychological and physical wellbeing of family members (1). For wives and partners of members of the armed forces, separation can lead to assumption of the single-parent role and financial difficulties as well as emotional problems and relationship challenges (2). This paper reports an evaluation of the work of The Military Wives Choirs Foundation (MWCF), which supports a network of choirs for women who are wives, partners or relatives of British Armed Forces personnel. Established in 2010, the programme now encompasses a network of over 75 choirs, each of which appoints a musical director and is responsible for its own day-to-day organisation. The Foundation provides guidance and information to local committees on issues such as recruitment, finances, facilities, musical direction, repertoire and performances. An important feature is that the choirs use a core repertoire of songs, the rationale being that this will allow women who move location to continue their engagement and access social support albeit in a different choir. The development of the Foundation arose out of a popular TV series presented by Gareth Malone focused on the creation of two military wives choirs (3). This was one of a series of such programmes on national UK television that has raised the profile of group singing in the UK (4).

Since 2000, there has been a substantial growth in research on singing, wellbeing and health, sufficient to support recent discursive and systematic reviews of the literature. Singing offers an opportunity to socialise, make new friends and benefit from social support and can promote a sense of mental wellbeing (5-7). However, all recent reviews caution that the existing literature is diverse with varied research designs, interventions and outcome measures and that further, larger and more controlled studies are needed. Clark and Harding (7) in a systematic review of singing as an intervention state:

Further research with random group allocation, validated measurement tools, larger sample sizes and mixed quantitative and qualitative designs might increase the potential for results that capture the psychosocial e ~~ffects~~ **ffects** of active singing for the purposes. (2012: 80)

More recent research has added to the corpus of studies on singing and health. A pragmatic randomised trial has demonstrated significant improvements in mental wellbeing in older people living independently (8). Singing together in unison has been shown to synchronise breathing and heart rhythms which may account for the reported stress-relieving attributes of singing (9). Group singing and other forms of active music-making can lead to increased tolerance of pain, perhaps through the central nervous system release of endorphins (10). Group singing has been shown to increase the level of the hormone oxytocin, often called the ‘bonding hormone’ as it is released in women during labour, childbirth and breast feeding, and is associated with feelings of emotional closeness and love (11). The suggestion is that this hormone may play a part in the positive feelings of belonging that people can report when they sing together in a group.

The value of group singing is not confined to personal and social wellbeing but also extends to supporting rehabilitation and maintenance of functional capacity in the face of disabling conditions. Research has identified clinically important health improvements from singing in people experiencing mental and physical health conditions including stroke, spinal cord injury, Parkinson’s, cancer, mental health, and COPD (12-19). While there is a need for more robust research designs including controlled studies, the increasing body of evidence lends support to the value of group singing for health and wellbeing.

In this study, the authors worked with the MWCF to design on-line survey instruments for members of the choir network, together with choir committee members and choir leaders. The central aim of the work was to assess the extent to which MWCF is achieving benefits for their members as specified in their Articles of Association (see 20 for further details).

## **Method**

### **Sample**

The population under study were all members of the MWCF network of choirs (including participants with committee roles in individual choirs) at the time of the survey (September 2014). A survey was also undertaken of choral leaders but these data are not reported on here. For data protection reasons, potential participants were contacted by the administrative team at MWCF with an invitation to complete the survey. The study was also advertised on social media sites through private groups accessed by participants.

### **Questionnaires**

The choir members’ questionnaire had five sections:

- Introductory questions - asking about choir membership, age and military connection
- Personal and social development, health and wellbeing – asking about friendship, confidence, personal skills, identity, view of military rank, affects on family, attitude of partner, family enjoyment, and effects on health and wellbeing
- Obtaining information and receiving communication – asking about the role of the MWCF, forms of communication with MWCF and within their choir, use of IT, attitudes to social media
- Music and performance – asking about musical skills, training provision, core repertoire, learning of material, enjoyment and confidence, feelings about performances

- A final section which requested feedback on the 'best and worst bits of your experience' and any additional feedback

The questionnaire for committee members also requested further information on their roles and experience of communications with the central administration of MWCF. Data on these issues are not reported here.

#### Procedures

Survey questionnaires were administered through the Bristol Online Survey facility. Most of the items involved a structured response scale but there was also scope for written feedback on aspects of the participants' experiences of the choirs and the benefits gained.

#### Analysis

Responses to the structured items in the surveys are given as frequency distributions in a tabulated format for regular choir members and those with a committee role. Written comments given in response to open questions were subject to a preliminary analysis by the first author in which the most immediately apparent themes were identified (21). The categories and coding were checked by the third author and illustrative comments extracted for this report.

#### Ethics

Ethical approval for the study was provided by Canterbury Christ Church University. The key ethical principles of relevance to the study were a commitment to anonymity in quoting any views expressed on the questionnaires. Details that could identify individual respondents have been removed from this paper.

## Results

#### *Sample characteristics*

Surveys were conducted over the period 16-30 September 2014. A total of 464 choir members (estimated 23.5% response rate) and 173 committee members (38.4% response rate) across the Military Wives network, participated in the study. Only 21 choir leaders responded to the survey and data from this group are not reported here. On the basis of estimated numbers of women in the network provided by MWCF, the combined numbers represent a minimum estimated response rate of 26%. This is a minimum figure as we have no information to confirm that every member of the network received the email with the invitation to participate. The response rate is reasonable for a rapid online survey of this kind, and judged by the breakdown of forces affiliation; length of time in the network, and age distribution of participants (see below), the sample appears to be broadly representative of the membership of the network as a whole.

#### Choir members

Time of membership in the participants' current choir was fairly evenly distributed from 1-6 months through to over two years. 44.2% had been members for up to one year, and 55.9% for over a year. 82 participants had been a member of one choir previously (17.7%) and 14 had been a member of a second choir (3.0%). The women's ages revealed a fairly normal distribution, with just under a third (32.1%) in the modal category of 40-49 years, and 17.5% aged 50 and above, and just over half (50.5%) aged below 40. Each of the armed services well represented in the sample: RAF, 21.8%; Army 50.0% and Navy 28.2%. This distribution reflects the relative size of the three forces. In terms of previous experience of music and singing, 392 participants gave information on singing before getting involved in the Military Wives Choirs and 57.9% reported prior experience. 32 participants reported training to sing (6.9% of the total sample). 173 reported ability to play an instrument (37.3% of the total sample). A total of 363 participants gave information of their ability

to read music and 47.1% reported they could read music.

#### Committee members

Time of membership showed a different distribution for committee members, with 30.8% being members for up to a year, and well over half being members for a year or more (69.2%). 37 had been a member of a previous choir (21.4%); with 4 a member of a second previous choir, 2 of a third and 1 of a fourth. The age distribution of committee members mirrors that of the choir members fairly closely, with just over a third in the modal category of 40-49 years. Fewer women were aged 50 and above (8.7%) and 54.9% aged below 40. The distribution of armed forces representation was also comparable to the choirs as a whole: 28.9% RAF; 48.6% Army, and 22.5% Navy. In terms of previous experience of music and singing, 148 participants gave information on singing before getting involved in the Military Wives Choirs (48.6% reported prior experience). Thirteen committee members reported training to sing (7.5% of the total sample). 66 also reported an ability to play an instrument (38.2% of the total sample). A total of 143 committee members also gave information of their ability to read music and 53.8% reported that they could.

#### *The benefits of participation*

Musical themes are strongly represented in the results for both regular participants and committee members. Benefits include improvements in singing, learning to read music, and improved knowledge of music. Improvements in personal and social skills were also reported, including: greater self-confidence in communication; improved social skills; improved organisational abilities, and generalisation of skills to other aspects of life. Respondents were asked about views on musical repertoire and their experiences of performance events. There were high levels of agreement that the core repertoire creates a bond and that performances are enjoyable. While a small number of participants report feeling pressure associated with performances, just over half report 'never' feeling under pressure, and well over 80% regard the number of performances they are asked to attend as 'manageable'.

**Table 1: Views of choir and committee members on songs and performances (%)**  
**Choir members (464), Committee members (173)**

Songs and performances	Strongly disagree	Disagree	Neither	Agree	Strongly agree
The core repertoire creates a bond					
Choir members	3.7	3.2	14.0	53.2	25.9
Committee members	5.8	3.5	9.2	55.5	26.0
I can learn the core repertoire					
Choir members	1.3	1.5	10.1	54.3	32.8
Committee members	1.2	3.5	4.6	57.8	32.9
I enjoy performing with my choir					
Choir members	4.3	1.3	4.1	25.0	65.3
Committee members	4.0	0.6	1.7	20.2	73.4
I sometimes feel pressure from the choir to attend performances	Never	Some of the time	Often	All of the time	
Choir members	56.0	34.7	5.4	3.9	
Committee members	56.6	30.7	7.5	5.2	
The performance element of choir membership is:	Positive	Negative			
Choir members	96.8	3.2			
Committee members	96.5	3.5			
The number of performances I am asked to attend is:	Manage-able	Too many	Not enough		
Choir members	84.1	9.7	6.2		
Committee members	83.8	9.2	6.9		
I have gained confidence through performing with my choir	Yes	No			
Choir members	84.1	15.9			
Committee members	88.4	11.6			
Has singing with your MWC developed your musical ability?	Yes	No			
Choir members	80.2	19.8			
Committee members	85.0	15.0			

*Health and wellbeing impacts*

Table 2 reports responses to survey questions about the personal, social, health and wellbeing benefits of participating in a choir. A majority of women in the sample report: increased numbers of friends; positive effects on health; increased levels of personal confidence; a stronger sense of wellbeing; development of new skills, and a strengthened sense of personal identity. It should be noted, however, that for the last four of these effects, over a quarter of participants disagreed or stated that they neither agreed nor disagreed. Part of the reason for this may be that these women felt that even prior to joining a choir, they already had a sense of confidence, wellbeing and personal identity, and that they already had skills associated with working together in groups and singing.

**Table 2. Personal and social development, health and wellbeing (%) Choir members (464),**

### Committee members (173)

Personal effects of membership	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
Membership of the choir has increased the number of friends I have					
Choir members	1.9	1.5	10.3	45.5	40.7
Committee members	5.8	1.2	6.9	36.4	49.7
The effect on my health of singing in a choir is (positive)					
Choir members	0.9	1.1	16.8	54.3	26.9
Committee members	0.6	0.6	20.2	50.3	28.3
My personal confidence has grown through membership of the choir					
Choir members	1.7	6.0	29.1	42.9	20.3
Committee members	1.7	7.5	18.5	38.2	34.1
I have a stronger sense of wellbeing since joining choir					
Choir members	2.8	2.8	23.1	53.0	18.3
Committee members	1.2	3.5	21.4	49.1	24.9
Membership of the choir has enabled me to develop new personal skills					
Choir members	2.2	8.4	36.4	38.1	14.9
Committee members	No: 52.2			Yes: 48.0	
Membership of the choir has developed my own sense of identity					
Choir members	2.8	11.2	32.1	41.2	12.7
Committee members	0.6	8.7	30.6	39.3	20.8

Effects on partners and families are reported in Table 3. Families, partners and husbands are generally supportive of the choirs (in excess of 80%). Interestingly, while over half of both groups report that their families have benefited from the participants' involvement in the choirs, over a third is non-committal about this and a small minority actually disagree. Choir members were asked whether their families enjoy attending choir events. Just over half agreed that they did (53.4%), just over a third were neutral (37.7%), and a minority disagreed (8.9%).



**Table 3. Effects on partners and families (%) Choir members (464), Committee members (173)**

Effects on partners and families	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
My family/husband/partner is supportive of my involvement with the choir					
Choir members	0.6	1.5	7.1	46.6	44.2
Committee members	1.7	5.8	6.9	36.4	49.1
My membership of the choir has positively affected my family					
Choir members	1.5	5.8	39.2	41.6	11.9
Committee members	2.3	9.2	33.5	43.4	11.6
Military rank is important to members of the choir					
Choir members	48.7	31.9	12.7	4.5	2.2
Committee members	50.9	30.6	12.1	4.6	1.7

### *Qualitative findings*

The tabled findings are further illuminated by a large amount of qualitative data generated by the open questions on the survey. The request to identify ‘the best and worse bits of your experience as a member of a choir’, to which all choir members taking part in the survey responded, provided rich data and useful insights into the women’s experiences of the programme. Just over half of women (51.3%) gave only positive accounts to this question and many explicitly stated in addition that they had nothing negative to say about their experience. The remainder (48.7%) also gave positive comments, but qualified them with some problem or challenge they had experienced. In what follows, the main themes identified. The purpose here is not to quantify the expression of these themes, but to illustrate them through representative comments.

The majority of the responses related to psychological and social aspects of health and wellbeing. A number of respondents reported that the choir had helped them to cope with serious mental health conditions:

*I had a breakdown in December and am slowly rebuilding my life. Being part of the choir has made me alive again*

*I was suffering from post traumatic stress ... It encouraged me to step out of the house. Especially when my husband was away*

*When I joined the choir I was on antidepressants... Within six months I was off anti-depressants and improving. I wouldn't say I'm completely cured but my weekly choir fix is an important part of my life, it gives me focus*

Other women reported general improvements in wellbeing and mood and general release of tension and stress:

*Uplifts my mood and promotes a feeling of wellbeing when I attend rehearsals and concerts*

*Assists in winding down at the end of a long day at work as I forget all about it and sing*

In relation to wellbeing, several women reported a general sense of happiness, enjoyment and being uplifted:

*I leave choir feeling more positive and uplifted*

*Look forward to choir night, feel happier and come away from practice feeling more positive*

For some, the choir enabled a sense of satisfaction, achievement and purpose:

*It gives me great joy. It has fulfilled a long-standing ambition*

*... To build up songs together to a standard which we can perform, and then see the delight on the audience's faces is a real privilege, as is the opportunity to perform in some amazing venues. All great experiences so far*

Others reported a stronger sense of personal identity:

*It's something for me that isn't organised by my husband's regiment or the kids' school! Being an army wife can be quite claustrophobic and it's good to have somewhere to go to meet people who experience the same daily challenges and are considerate of them but don't necessarily want to talk about them! I go to choir and I'm just 'me' not 'his wife' or 'his mum'!*

Social support, camaraderie and opportunities to make friends through the choir, were particularly important:

*I really enjoy being part of a social group ... It has been great to meet new people, make new friends and to be accepted for who I am. I have had the opportunity to sing a solo even though I haven't got the strongest voice in the choir. I don't feel there are any negatives to being a part of a choir, it is quite simply a fantastic opportunity which I never thought I would have*

The way in which participants talked about social support often reflected the particular conditions of military life:

*Great camaraderie... similar to what we see in husbands together*

*... It is MY time, doing something I adore which relieves the stress of the week. I have new friends who have similar backgrounds to mine and understand my family dynamics. It is a wonderful support network and I couldn't live with it now!*

The opportunity to make friends was particularly important when settling into new postings:

*I found it really hard at this new posting, going to choir has helped me to settle*

### *down and find friends*

Five women out of a total sample of 464 reported particular tensions and difficulties they have experienced within choirs. The challenges encompass internal management and communication, as well as musical challenges. The reported attitudes and behaviours of women within the choir were sometimes perceived negatively in terms of power relationships:

*There was a lot of politics. As I wasn't part of a regiment I was made to feel like an outsider*

*On the negative side I find some members of the choir power mad either through their husband's rank or position on the committee and there can be a lot of bitchiness I sometimes feel that if I disagree with the committee I am branded as 'negative' and we are told we must all support the committee. It makes it difficult to give constructive criticism from a member's point of view*

*It can turn quite bitchy or tense and I don't like it at all. There is too much stress in life in general – I don't need it in a hobby. However, I do understand that problems need to be resolved and communication is key. Our chair is very good at communicating issues and stamping out any problems quickly*

Issues of favouritism and jealousy cropped up from time to time:

*Jealousy, cattiness as is often found in a group of women.... 'Cliqueness' within committee .... favouritism*

The use of social media, which was generally viewed as a convenient tool for communicating information about choir rehearsals and performances, sometimes compounded these difficulties:

*The worst part is that bitchiness and cliques within the choir; comments are often made on (Social Media) or at rehearsals that are loaded or that I do not understand as I do not know (and have little interest in) the choir politics behind them*

Although the majority of respondents gave positive responses regarding musical experiences, some music related concerns were raised. These sometimes centred on the approach of the musical director and encompassed issues such as effectiveness of rehearsals, dislike of repertoire, favouritism or disputes in the selection of soloists, expectations and pressures related to performances:

*Our choir does FAR TOO MANY GIGS and as a result people are reluctant to commit and the standard of performance is definitely below par, verging on the unacceptable. Our MD refuses to give section rehearsals, despite me having offered to assist with these, and this hinders our ability to learn the parts effectively. With so many gigs, we are constantly fire-fighting rather than learning songs to an acceptable level and perfecting them. Also object to having to wear fancy dress for gigs*

Issues about dress code and the expectation that choir members would conform to a particular image was sometimes contentious:

*They make us all wear the same dresses. We are not all size 10, having to wear exact same jewellery. We can look like a choir in the same colour and similar dresses. I can't understand why we need to be clones of each other this is not going to make the sound any better... very sad*

Those involved in making decisions about choir activities faced a difficult challenge of balancing different levels of interest and commitment:

*Difficult to get the balance of number of performances right to keep all members happy... people have left due to number of rehearsals need to attend in order to perform, even though we say they don't have to perform if they don't want to*

The role of the music director is clearly key in terms of shaping positive and negative experience of musical leadership in a choir:

*Have had wonderfully positive experiences of highly musically competent MD who embraced the (core) repertoire and had a great understanding of military life. Also had experience of an MD with poor musical ability and little/no understanding of the ins and outs / up and downs of military life and little interest or passion for the (core) repertoire*

## **Discussion**

### *Principal contributions of this study*

This study makes an important contribution to the growing body of international research literature on singing and its benefits. It is the first survey of women participating in singing groups in military settings, highlighting the value of singing for their personal and social wellbeing. It is also the first study of its kind of a national/international network of singing groups that documents not only the reported benefits participants have experienced, but also highlighted some of the tensions and challenges that can arise in singing groups that are established over time. Some of these challenges, such as choice of repertoire and the number and intensity of performances, may apply to many singing groups, whereas some, including some of the relational issues reported as well as issues about image and behavioural expectations, may have been influenced by the specific context of military services. While most respondents reported support from their family/husband/partner, 40% did not agree that choirs had had a positive effect on their families. While the majority disagreed that military rank is important in the choirs a small minority of women were also conscious of the role of military rank within their choirs.

Large majorities of choir and committee members report positive benefits from their engagement, including: increased numbers of friends; positive effects on health; increased levels of personal confidence; a stronger sense of wellbeing; development of new skills, and a strengthened sense of personal identity. There was some variability, however, with these items, and disagreement may reflect a sense that confidence, skills and wellbeing, for example, were already high and so had not improved.

Reported impacts on health and wellbeing were also substantial and include: help with serious mental health conditions; general improvements in wellbeing, confidence and morale; release of tension and stress; coping with on-going stresses related to military life, and social support given at

a time of serious physical illness. It is abundantly clear that the Military Wives Choirs do meet the aims of the MWCF in supporting the welfare of wives and partners of men in the UK military.

### *Limitations of the study*

The study involves the use of on-line self-completion questionnaires and there are a number of limitations. Participation was voluntary and anonymous and given the estimated number of choir members at the time of the survey, the response rate is considered moderate but acceptable. Examination of the profile of the respondents also appears fairly representative of the network as a whole in terms of military affiliation, age and length of choir membership (as judged by MWCF).

A further limitation is that data cannot be broken down according to the circumstances, longevity or location of specific choirs. Also, the study is restricted to current choir members, and does not include women who have left or have never been part of a choir. Both of these groups are likely to provide interesting insights into the potential role of choirs in supporting the welfare of women and their families on military bases. Finally, the questionnaire was specially developed for this study and refined through discussion with programme staff. While small-scale piloting ironed out any lack of clarity in wording, the questionnaire was not tested for reliability and validity. Ideally it could have been supplemented with validated measures of health status and wellbeing but this was not part of the scope of this preliminary study.

These limitations are part of the conditions and constraints under which research is often conducted and are not to be regarded as weaknesses.

### *Further research*

This preliminary study suggests that there is considerable scope for further research to pursue basic scientific questions on how, why, when and for whom, singing is beneficial for the wellbeing and health of wives and partners of military personnel. Further directions might include: surveys of women who have joined and subsequently left a choir or women who have no interest in joining; longitudinal studies of the health impacts of regular singing and its effects on participants and their families; research examining the extent to which membership of choirs leads to less reliance on military welfare and health services; qualitative exploration of the complex dynamics that can surround choirs in military contexts and whether the choirs play a different role in army, navy and air force settings, and finally, research comparing these choirs with others associated with services (e.g. police choirs, fire services choirs), organisations and workplaces, and in the community.

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