Singing for staff wellbeing: feasibility study of choirs across two acute hospital sites

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Abstract

Aim

The high levels of stress among NHS staff plus the evidence base for the value of singing for wellbeing, led to the current research aims:

- To determine the feasibility of recruiting and retaining staff singing for wellbeing groups over three months and the acceptability of the proposed data collection methods.
- To explore the potential impact of singing on staff wellbeing.

Methods

A feasibility study using a two-group, wait-list design with pretest, posttest measures plus participant feedback.

Findings

Recruitment failed to meet the target set and only 50% participants returned both pre and post singing questionnaires. Acceptability of the programme was high and, despite limited data, positive findings emerged in mental and work-related wellbeing, while participant comments were universally favourable.

Conclusion

This feasibility study suggests that proceeding to a full trial will require changes to maximise recruitment and retention. The impact of singing on the wellbeing of staff is potentially positive.

Background

Over the last few years staff sickness and absence rates for the NHS in England have remained high (NHS Digital 2017). A major cause in recent years has been high levels of workplace stress, adversely affecting mental wellbeing (RCN 2013). The NHS staff survey 2016 (Picker Institute 2017) showed that 37% staff nationally reported feeling unwell due to work-related stress over the last twelve months.

There is evidence that staff wellbeing is linked to performance and to patient satisfaction with health care (Maben et al 2012; National Nursing Research Unit 2013), highlighting the importance of supporting staff wellbeing at work in order to promote the delivery of high quality care.

Various suggestions have been put forward for addressing staff health and minimising stress and 'burnout'. In terms of evidence for the effectiveness of various interventions, a systematic review of workplace stress management in the nursing profession found current available research to be largely inconclusive (Mimura and Griffiths 2003).

One area, not mentioned in the review, that has recently attracted attention for its ability to positively affect personal mental wellbeing is that of participative singing. with evidence that it has benefits for older people (Coulton et al 2015; Skingley et al 2016), mental health service users (Clift and Morrison 2011) and people with COPD (Morrison et al 2013; Skingley et al 2014). There is therefore reason to suggest that benefits can be obtained in a wide range of social groups, including those based in the workplace. The research described here took place in a large acute trust in S.E. England where the reported levels of work-related stress were higher than the national average (Picker Institute 2017). Therefore it was felt that providing an opportunity for staff to join a 'singing for wellbeing' choir might have positive impact.

Literature Review

Within the NHS a number of such choirs already exist, notably Lewisham & Greenwich NHS choir which reached number 1 in the pop charts at Christmas 2015 (BBC News online 5th May 2016) and

Forth Valley Hospital choir (Trueland 2015) which featured on TV in 2016. One NHS Trust which has gained accreditation for its staff wellbeing programme (Norfolk and Norwich University Hospitals NHS Foundation Trust - Wray, 2013), included the setting up of a staff choir as a means to promoting mental health.

None of these workplace choirs appear to have evaluated their success formally, and no reports on workplace health in the NHS could be found which included recommendations for singing to help alleviate stress. However, a limited number of related studies do exist. A Norwegian study (Vaag et al, 2013) reported improvement in measures of engagement, burnout and measurement of organizational commitment among health staff who sang in workplace choirs. The project sample was large (n=426) but the design had weaknesses in that no baseline measure was taken and the two groups (intervention and comparison) were self-selecting.

Bygren et al (2009), in a randomised controlled trial, found quality of life scores on the SF-36 (Sullivan et al, 1995) for medical staff involved in cultural participation (including singing), improved in the areas of physical health, social function and vitality. Here, though, the effect of singing specifically was not the focus.

Davidson and Faulkner (2010) conducted an exploratory study in Western Australia where a choir was formed of paid employees, volunteers and clients of a not-for-profit caring organisation (n=30). Various evaluative methods including reflections, feedback and interviews resulted in positive findings in terms of energy levels, attitudes, social networking and support among those taking part. No validated measures appear to have been used in this piece of research.

Singing for work wellbeing was therefore felt to be an area that should be explored and evaluated in order to address the staff health issues outlined above. However, in view of the paucity of existing evidence, especially around the practicalities of setting up workplace choirs in the NHS, it was decided to undertake a small, feasibility study as a starting point.

Research aims

1. to determine the feasibility of recruiting and retaining staff singing for wellbeing groups over 3 months and the acceptability of the proposed data collection methods.
2. to explore the potential impact of singing on staff wellbeing.

Method

The project was a feasibility study, which is 'a piece of research done before a main study' (Arain et al, 2010). Previous experience in the field of arts and health research suggested that an incremental approach should be taken to test feasibility ahead of large-scale or controlled studies.

The design was an adaption of that used by Vaag et al (2013) in Norway. The present study used the measures where Vaag detected a difference between the groups, together with a quality of life measure previously used in arts and health research. This addressed the weakness noted above in Davidson & Faulkner's study. Questionnaires were administered on three occasions (baseline, three months and six months) to two newly set up singing groups, one at each of two hospital sites. Groups were allocated to initial intervention (group A) or wait-list control (group B), meaning they did not self-select into first or second intervention. This approach at least partially addressed the drawbacks to Vaag's design. (Figure 1)

Sample

Recruitment of staff to the choirs was based on publicity and word of mouth. In addition to advertising in the trust's newsletter and producing posters, the two researchers visited wards and departments speaking to individuals and handing out flyers detailing the planned research and two 'taster' sessions were held, one at each of the two sites. Inclusion criteria were based purely on an individual's status as trust staff. Based on experience with other choirs, it was thought that this might give a potential total sample of about 70. Assuming a 20% loss to follow-up between baseline and 3 months (based on previous work undertaken by the authors [Coulton et al, 2015]), a final number was anticipated to be around 55. A power calculation was not undertaken as this is not required for a feasibility study (NIHR 2017). Due to a less positive response from the second site, a second round of publicity and recruitment took place at 3 months, ahead of this group's intervention.

Intervention

The intervention took place between March and May 2016 for group A and between June and August 2016 for group B. An experienced facilitator of singing groups was recruited. A weekly, one hour

programme of singing (therefore a more focused intervention than Bygren's study) was designed to run over 3 months. Previous research undertaken by the authors found that this is sufficient to detect change in quality of life measures (Coulton et al, 2015) and is also longer than all but one of the studies reviewed by Mimura and Griffiths (2013). The programme included 'warm-up' exercises and an initial range of musical styles and varying degrees of complexity in order to determine group preferences. The facilitator style encouraged a relaxed and 'fun' time out from work and the programme was developmental. Handouts were distributed to remind staff of lessons learned and to encourage home practice. In addition, each week a 'mission' was given for participants to work on, with feedback when they met again. Songs were learned and sung either 'a cappella' or accompanied by guitar, with words appearing on a flipchart. Venues were booked within the trust for weekly, late afternoon sessions. Attendance records were kept to enable later analysis of changes in wellbeing in relation to number of sessions attended.

Data collection procedures

Quantitative data were collected on: recruitment, retention, attendance at singing groups (registers), response rates to questionnaires and the following measures:

i)Health related quality of life measures, using the WHOQOL BREF (Skevington et al, 2004). This is a 26-item questionnaire which has been devised to measure four domains of quality of life (QoL): physical, psychological, social and environmental.

ii).Measurement of Engagement and Burnout (MEB) (Schaufeli et al, 2006). This is a validated tool based within the framework of 'positive psychology', which measures positive (engagement) as well as the more traditional negative (burnout) poles of workers' wellbeing.

iii).Organizational Commitment Questionnaire (OCQ) (Mowday et al, 1979). This is a validated tool which taps into an individual's commitment to an organization.

iv). A brief questionnaire capturing demographic data including age bands, area of work, time in post, previous experience of singing.

i)-iv) were combined into a single questionnaire (removing the demographics for follow-up administration) and administered to all participants electronically at baseline, 3 months (following group A's singing programme) and 6 months (following group B's programme).

Qualitative data were also collected to capture the experiences of participants through free comments on the questionnaire and on anonymous 'post-it' notes after the last sessions.

Ethics

Confirmation of compliance with the requirements for proportionate ethical review was received from both the university and the trust R&D departments. Participants were provided with an information sheet and signed to signify informed consent prior to participating. Anonymity of questionnaire data was assured. All data were stored either electronically on a password-protected computer or on paper in a locked filing cabinet.

Data analysis

As a feasibility study, the analysis was largely descriptive in terms of identifying the parameters outlined in the primary research aims. Thabane et al (2010) have suggested setting targets for decision-making around whether to proceed to a full study and these were agreed and set as:

- Recruit at least 15 to each choir
- 80% retention and questionnaire completion
- Acceptability of intervention, measures and, where relevant, wait-list allocation .

Recruitment and attendance records were scrutinised to assess whether targets were reached. Participant-based feedback data were analysed using the 'feasibility' questions (see above) as guidelines. The standardised quality of life and work wellbeing measures were analysed according to guidelines. Since previous studies have found benefits from singing to be related to frequency of engagement, only those attending for at least half of the singing sessions were include in the analysis. All data were transferred to an Excel spreadsheet and means and pretest-posttest differences calculated for the two groups for each QoL domain of the WHOQOL BREF (which included transforming the scores as per guidelines) and overall MEB and OCQ scores.

Findings

Recruitment and retention

Data on recruitment and retention contributed to addressing the first (feasibility testing) aim of the research. Initial interest in the project was high and achieved over the target figure at pre-intervention.

However, after excluding those attending for under half the sessions, numbers dropped considerably, with a further drop in the number of questionnaire returns. Figures for recruitment and retention are given in table 1.

Characteristics of those completing questionnaires at baseline are displayed in table 2 and show few differences between the two groups. The majority of participants were over 40 years of age, which broadly reflects the age profile of the NHS workforce as a whole (NHS Employers, 2013) and had been employed in the trust for over 5 years. The largest employment group was nursing and midwifery and a majority worked full time. Only three out of 17 were singing in a choir at the time.

Feedback from participants

Data from participants also contributed to addressing the feasibility of the project and yielded the following information:

Set-up, publicity and recruitment

The idea at baseline was well accepted and timing and venue suited most well. One person unable to attend regularly suggested 30 minutes during the day as an alternative for those not working office hours:

'I love the idea of the singing group - it made me feel pleased with the organisation for supporting this type of project. I just wish we could have a 30 min one during the day'.

(Gp A Baseline).

There was general support for the recruitment methods used, though some staff were noted not to access emails regularly. One person commented that items in Trust News are often too embedded and can be easily missed. Additional suggestions included use the information 'hubs' (dedicated information exchange rooms).

The singing programme

Participants felt that the programme was well organised and the facilitator was described as 'excellent', as a 'good motivator', 'professional and inspiring' and 'couldn't be faulted'. The song selection was judged to be good and some individuals felt inspired to either join a choir or purchase the CDs of songs which the facilitator had introduced. Some material was felt to be challenging for a

few. Several participants suggested that the song lyrics (written on a flip chart) could be in larger print or sent electronically. A minority had a preference for being provided with the musical notation.

Research procedures

The procedures and instructions were seen to be clear, and questions easy to complete. One respondent commented on the prompt response to emails sent to the researchers, though another person found responding to some of the questions difficult, having not been employed in the trust for long.

Effects

All participants commented positively on having taken part in a singing group. Comments covered emotional/psychological wellbeing, social benefits, work attitude and learning. In terms of emotional wellbeing, sentiments included 'fun' and 'enjoyment', 'lifting spirits', 'feeling more positive and cheerful':

'I have really enjoyed participating in this singing programme and found it has lifted my spirits. I talk about it to my family on a regular basis….. Thank you for offering this opportunity to be part of the singing programme. I have had great fun!' (Gp A, 3 month questionnaire)

For one participant 'without a doubt these sessions have been the best part of my week', while other wellbeing sentiments included references to 'feeling alive' and 'feeling de-stressed after a singing session', and to 'gaining confidence in singing'.

There were a number of comments relating to the social benefits of the group:

'I have really enjoyed the singing project and the benefits it has brought me in relationship to friendships' (Gp A, 6 month questionnaire).

'I enjoyed taking part in the project and hope that the choir carries on. It was nice to meet staff from other areas.' (Gp A, 6 month questionnaire).

Both of these comments are interesting in that, some three months on from the ending of the project, they represent a possibly enduring nature of a connectivity felt with staff in other areas of the trust. Similar sentiments were expressed by others in terms of 'a community of people who love to sing' and a 'sense of special community'.

There was also a suggestion that work wellbeing increased after the singing programme. Participants mentioned being more enthusiastic, positive and inspired to meet the challenges at work and one respondent felt that this could lead to better relationships with colleagues. Being 'de-stressed' and relaxed could also contribute to this positive work ethic. The mechanism by which participating in a singing group could affect the workplace was rationalised by one participant:

'I'm sure singing does affect wellbeing. I always felt cheerful after a session, … maybe attending the [singing] sessions is confidence boosting and therefore inspires/motivates us to meet challenges that we have to cope with whilst at work.' (Gp A, 3 month questionnaire).

One comment which well sums up the general response to being in the project was made on the post-singing questionnaire:

'It definitely impacts on wellbeing. On several occasions I had to really push myself to attend because life was being difficult at the time and curling away seemed preferable. I always left feeling much better and more able to put the rest into perspective. I think it has an immediate effect on how you feel but also a longer term impact on confidence and equilibrium. The experience of having the group begin to form into a community is something else I will also remember and apply elsewhere.' (Gp B, 6 month questionnaire).

Outcomes on wellbeing measures

Data from the standardised measures served to address the second of the research aims and are discussed below.

WHOQOL BREF

At baseline, scores for physical health were similar for the two groups. Following the three months singing programme the intervention group (group A) improved on this measure, while the control (group B) showed a slight deterioration. For group A, the positive physical effect plateaued by month 6 (three months after the singing finished), while for group B (immediately post-intervention) the previously stable state had improved, though still trailing behind group A (Table 3 and Graph 1).

In the psychological domain, the intervention group at baseline showed slightly higher wellbeing scores than the control. Both showed improvement at three months, with greater improvement for the

intervention group. By month 6, group A scores had reduced, while group B scores had remained stable (Table 4 and Graph 2).

In the social domain the pattern was similar to the psychological domain initially, with both groups improving their scores but the intervention group showing higher scores. However, by month 6 the scores for group A continued to show improvements in wellbeing while those for group B decreased (Table 5 and Graph 3).

In the environmental domain there was little change for either group but again the intervention group showed a slightly greater improvement than the control. At month 6 the pattern was as with the physical domain, but with group B scores overtaking those of group A (Table 6 and Graph 4).

Work and Wellbeing

Work and wellbeing data show similar slight improvements for both intervention and control group at 3 months, with the difference between the two groups becoming less over this time. By month 6, both groups had continued to show a mean improvement in work and wellbeing scores, with group B showing a greater improvement than group A (Graph 5).

Organisational Commitment

This questionnaire suggested a slight difference to the above patterns, since though both groups registered higher commitment at 3 months than at baseline, group B showed a slightly higher score at both baseline and follow-up. At month 6 data showed an improvement in group B but some dropping off for group A by that time (Graph 6).

Study Limitations

As a piece of conventional research, this study has limitations in terms of measuring the impact of group singing on staff wellbeing. However, this was not its purpose as a feasibility study. Even so, the sample was small and retention challenging, which limits any firm conclusions regarding the recommendation to proceed to a full trial, if following the same design and procedures. In addition, the research did not adopt an exact crossover design, since further recruitment to group B took place ahead of that group's intervention. This means that the group's makeup had changed between baseline and the 3 month measure, making the intervention/control findings at 3 months potentially skewed. A crossover design is also arguably not suitable for this type of intervention, where the effect of singing

may be long lasting. Finally, the design did not allow for follow-up of specific individuals, but did allow for full anonymity which was felt to be important in the questionnaire data collection.

Discussion

This was a limited-scale study, whose primary aim was to determine the feasibility of progressing to a larger-scale evaluation in terms of anticipated recruitment, retention and acceptability to participants. The data show that recruitment did not meet the set target of 15 per choir, though interest was considerably higher initially, suggesting that there may have been problems with suitability of time, venue or sustained commitment to attendance on the part of those not recruited. Further, researchers may have had greater success given more resources and time to engage in active recruitment methods. In terms of retention, only 50% participants overall returned both pre and post-singing questionnaires. However, analysis does not include those who attended only occasionally, which was a feature of both groups, given the nature of NHS work. Recruitment and retention therefore, were perhaps better than the research data imply.

Acceptability, judging from participant feedback, was high. The time and venue suited participants well, although this was largely predictable given that participants would not have been present had this not been the case. The timing was based on a previous survey, indicating late afternoon to be the preferred time for a majority. The singing programme and facilitator were universally well evaluated and the research procedures were also felt to be acceptable. Overall, however, the findings for the first research aim would suggest that proceeding to a scaled-up version of the research may not be feasible without some changes.

With regard to the second (impact) aim, data from wellbeing measures are too limited to come to any firm conclusions. However, the general consistency in terms of positive trajectories in most measures following the singing programme is interesting. Although groups showed similar baseline profiles, the first control group (B) showed lower scores at baseline for all measures except the OCQ. The 6 month follow-up tended to replicate the 3 month findings, that is, improvement in wellbeing for the intervention group (at this stage,B), while the control group (A) plateaued or deteriorated. Tables 2-5 indicate changes to group means on the WHOQOL BREF which, if scaled up, might indicate a

minimal clinically important difference, extrapolating from the work of Den Oudsten et al (2013). This is the pattern to be expected if singing does make a difference to wellbeing.

Comments from participants largely support the quantitative findings, especially in psychological and social wellbeing. Participants also commented about learning about breathing, so it is possible that physical benefits were also present. Finally, participants also mentioned feeling de-stressed, positive and inspired to meet challenges at work, which could affect relationships with colleagues.

The wider area of singing for wellbeing for various population groups is well documented and a number of research projects have demonstrated the psychological, social, and physiological benefits highlighted here (Clift and Morrison, 2011; Morrison et al., 2013; Coulton et al., 2015; Skingley et al., 2016). For a workforce group this research suggests the possibility of similar benefits at work, supporting Vaag's (2013) findings. Such benefits affecting an NHS workforce also have potential implications for quality of patient care (Maben et al., 2012), so increasing the value of the intervention.

Conclusion

This feasibility study has provided information on the procedures which would be followed by a large cluster research trial of singing for NHS staff wellbeing. Meeting identified targets for recruitment and retention was challenging but feedback from participants was very positive, meaning the first research aim and primary outcome was only partially met. Standardised wellbeing measures showed potentially positive results thus informing the second research aim. Proceeding to a larger piece of research may therefore be possible with certain changes as recommended.

Recommendations for future practice and research

Although insufficient evidence exists to firmly recommend singing groups for staff in NHS trusts, this study, along with previous research, suggests that it is likely to be beneficial for those to whom it appeals. Where groups are to be set up, the experience from this project suggests that attention should be given to recruitment by investing in face-to-face communication across departments. Further it is suggested that, as here, implementation should be preceded by a survey to find out the best time and venue and followed by an evaluation of benefits for staff. More broadly, there are arguments for a greater resourcing of Occupational Health Departments to ensure that staff wellbeing gains greater

prominence in NHS trusts (NNRU, 2013; Sprinks, 2013). Singing for health could then be signposted as one option within a wellbeing strategy. Where time out for joining a group is an issue, consideration should be given to integrating singing and music into care practices which can be mutually beneficial to carers and cared-for (Sonke et al, 2017; Vella-Burrows, 2009).

With regard to further research, a larger trial would identify with greater certainty whether singing does contribute to staff wellbeing. Guaranteeing confidentiality rather than full anonymity would enable the identification of any differential outcomes for those already engaged in singing as well as the tracking of individuals through the three data collection phases, follow-up of less frequent attenders and greater ability to compare variables across the two groups. In addition, looking to a future where social prescribing is more widely accepted, it may be possible to avoid the self-selecting of individuals into such singing groups, which tends to result in those predisposed to singing taking part. However, this is probably not without challenge at present.

Implications for practice

- Singing in a group has the potential to contribute to the wellbeing of NHS staff.
- Where singing groups are under consideration, time and resources should be allocated for publicity and recruitment.
- Evaluating the impact of singing groups for staff presents challenges in the current NHS climate.
- A larger scale cluster randomised trial is needed to confirm findings from this study.

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Conflict of interest.

The authors confirm that they have no conflicts of interest to declare.

Figures, tables and graphs

Figure 1. Research design

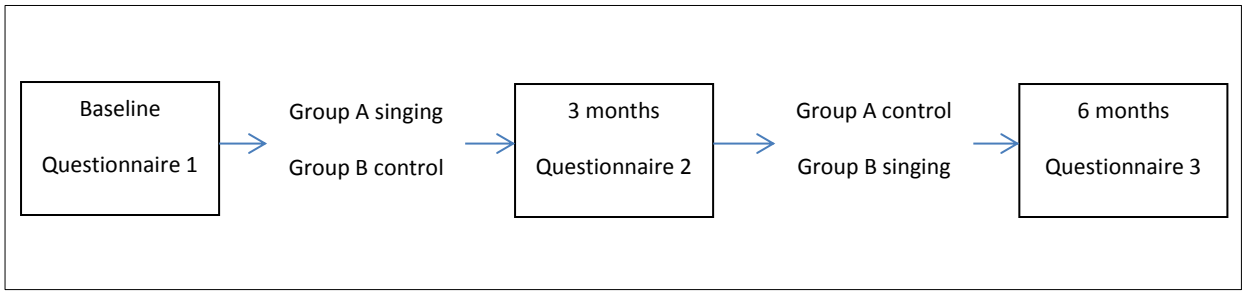


Table 1. Recruitment and retention.

Questionnaire round	No. sent	No. returned after reminders
Gp A Baseline questionnaire (pre-intervention)	18 expressed interest in taking part	12
Gp A 3 month questionnaire (post intervention)	9 consented and attended at least half of sessions	6
Gp A 6 month questionnaire (follow-up)	9	4
Gp B Baseline questionnaire	14 expressed interest in taking part at baseline	8
Gp B 3 month questionnaire (pre-intervention)	23 expressed interest in taking part at pre-intervention	11
Gp B 6 month questionnaire (post intervention)	7 consented and attended at least half of sessions	6

Table 2. Baseline demographic profiles of participants (n=20)

Characteristics	Gp A	Gp B	Total
Age			
>20	0	0	0
20-29	0	0	0
30-39	1	0	1
40-49	4	2	6
50-59	6	5	11
>60	1	1	2
Time worked in the trust			
< 1 year	1	1	2
1-<2 years	0	1	1
2-<5 years	0	1	1
5-<10 years	4	0	4
>10 years	7	5	12
Area of work			
Nursing/Midwifery & support	4	6	10
Medical/dental	0	0	0
Allied health & support	1	0	1
General management	2	0	2
Other scientific & technical	0	0	0
Admin & clerical	3	2	5
Central functions/ corporate	1	0	1
Maintenance/ancillary	1	0	1
Other	0	0	0
Employment			
Full time	7	5	12
Part time	5	3	8
Currently in a choir			
yes	1	2	3
no	11	6	17

Table 3 WHOQOL Domain 1 (Physical)

	Baseline	3 months	6 months
Group A	64.3	77.1	81.2
Group B	59.3	68.7	63.5

Graph 1. Domain 1 (Physical)

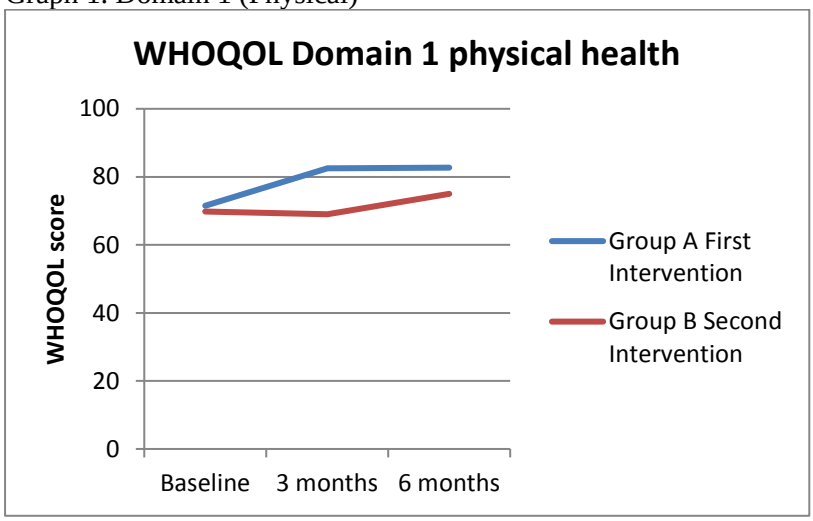


Table 4 WHOQOL Domain 2 (Psychological)

	Baseline	3 months	6 months
Group A	67.1	74.1	73.5
Group B	66.3	69.9	75

Graph 2. Domain 2 (Psychological)

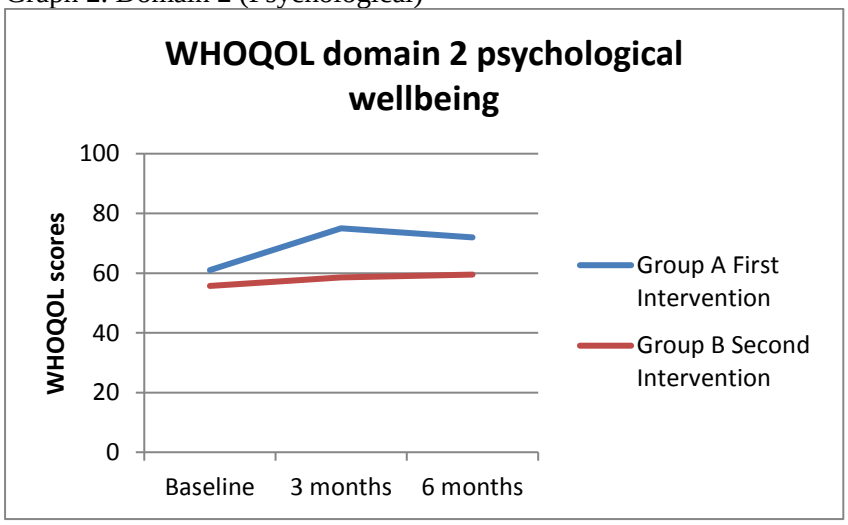


Table 5 WHOQOL Domain 3 (Social)

	Baseline	3 months	6 months
Group A	64.3	77.1	81.2
Group B	59.3	68.7	63.5

Graph 3. Domain 3 (Social)

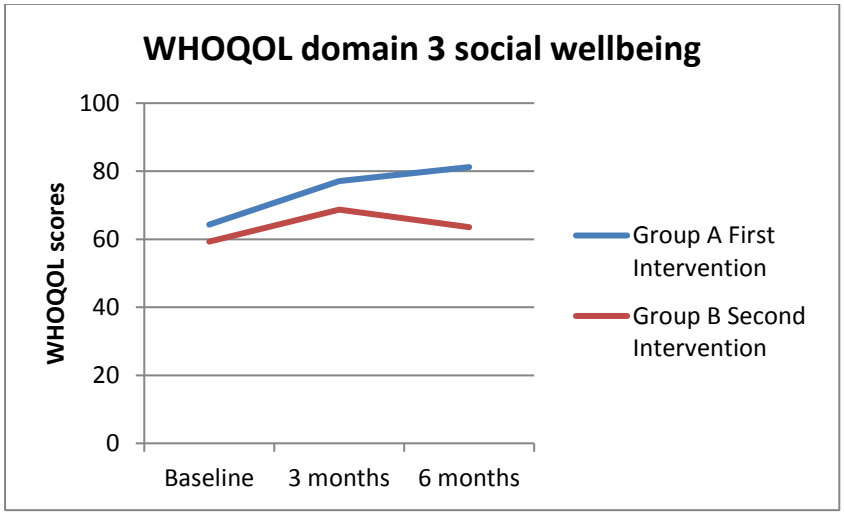
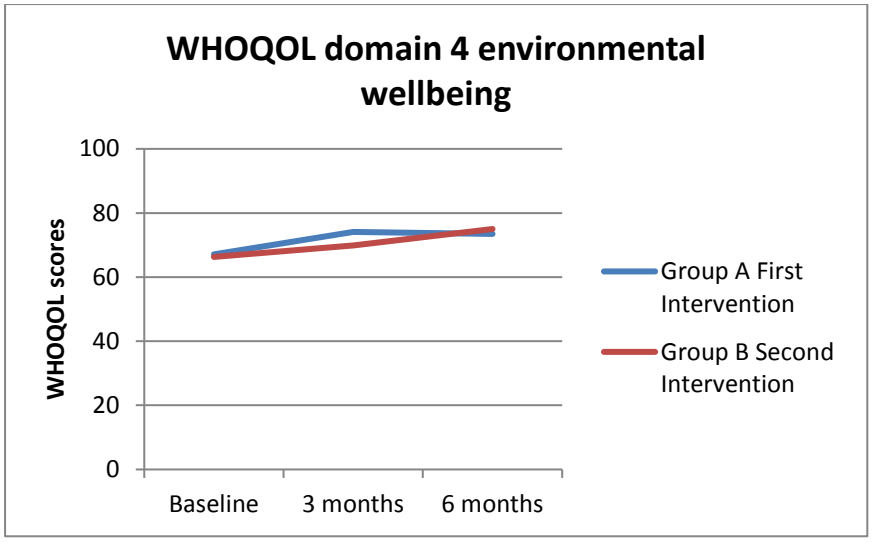


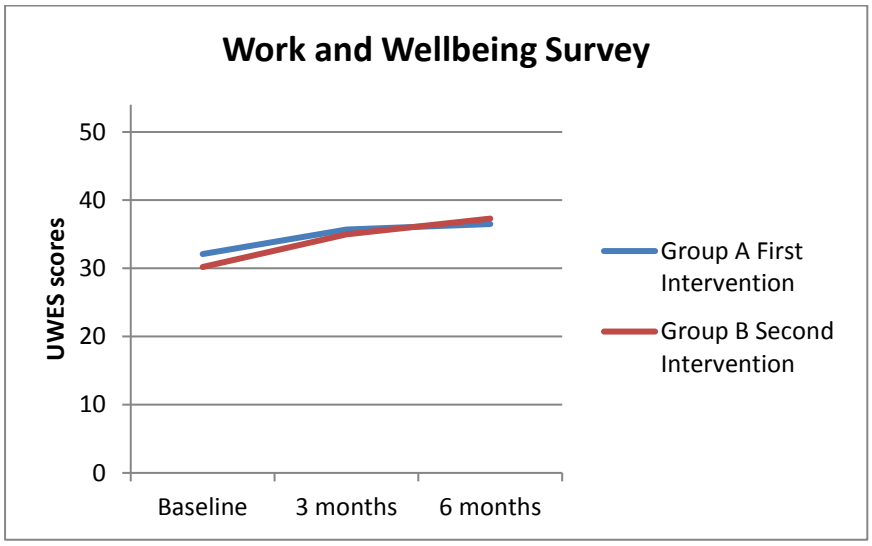
Table 6 WHOQOL Domain 4 (Environmental)

	Baseline	3 months	6 months
Group A	67.1	74.1	73.5
Group B	66.3	69.9	75

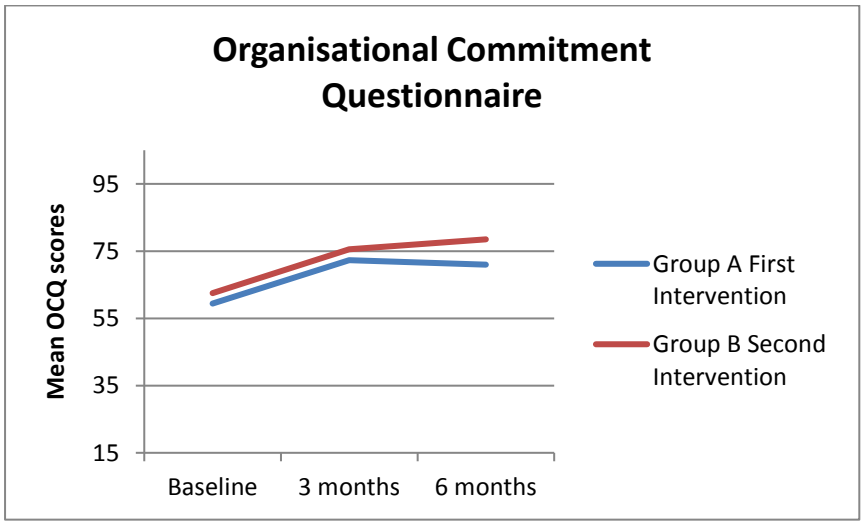
Graph 4. Domain 4 (environmental)



Graph 5. Work and wellbeing



Graph 6. Organizational Commitment



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