

**The Impact of Group Singing on Health-Related Quality of Life  
in Parkinson's Disease: A Qualitative Study**

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This thesis is submitted in partial fulfilment of the requirements for the degree of

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School of Psychology,

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## Preamble

### Declarations

1. This thesis contains no material which has been accepted for award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. I give consent to this copy of my thesis being made available worldwide when deposited in the University's Digital Repository (unless an embargo has been approved for a determined period) subject to the provisions of the Copyright Act 1968.
  
2. I hereby certify that the work embodied in this thesis has been done in collaboration with Dr Kerry Chalmers<sup>a</sup> and Dr Anee Baird<sup>b,c</sup>:
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  - <sup>c</sup> Department of Psychology, Faculty of Human Sciences, Macquarie University.
  
3. I hereby certify that the work embodied in this thesis contains a co-authored scholarly work, of which I am a joint author. I confirm that I contributed to each phase of the joint scholarly work including the research design, recruitment, data collection, data analysis and interpretation and the writing of the manuscript.

Supervisor Endorsement

Date 13/4/2016

*Dr Kerry Chalmers*

4. The work in this thesis was carried out under the supervision of Dr Kerry Chalmers, University of Newcastle.
  
5. The conduct of this research was approved by the University of Newcastle Human Research Ethics Committee (approval number H-2014-0284, Appendix A) and Macquarie University Human Ethics Committee (approval number 5201400414, Appendix B).

Signed

Date 13/4/2016

*Romane Abell*

## Acknowledgements

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## **Publication and Conference Presentation**

### **Journal Manuscript Submission**

A component of this thesis is a research manuscript that has been submitted to, and peer reviewed by, the American Psychological Association Journal Health Psychology (No. HEA-2015-3592). Please refer to Appendix C for confirmation of the peer review, Appendix D for the Journal's scope, and Appendix E for the Journal's Guidelines for Authors.

Abell, R. V., Baird, A. C., & Chalmers, K. D. (2015). *Group Singing and Health-Related Quality of Life in Parkinson's Disease*. Manuscript submitted for publication.

### **Presentation**

The qualitative findings of this research were presented by the author at the Parkinson's Australia National Conference, Adelaide Convention Centre, 27 – 29 May, 2015. Refer to Appendix F for the submitted abstract and, Appendix G for the confirmation of the speaker acceptance.

Presenter, Abell, R. V. (2015). *Group Singing in Parkinson's disease: A Qualitative Study of Quality of Life*. Paper presented at Parkinson's Australia National Conference, Adelaide, Australia, May 2015.

## Structured Abstract

### Scope

Idiopathic Parkinson's disease (PD) is a chronic, progressively disabling neurological disorder, comprising both motor symptoms (MS) and non-motor symptoms (NMS). People with PD have reduced health-related quality of life (HRQoL; Karlsen, Tandberg, Årslund, & Larsen, 2000; Simpson, Lekwuwa, & Crawford, 2014). To date there is no cure for PD. The primary goal of treatment is to restore or maintain HRQoL through assessment and intervention, while simultaneously managing MS (Fung, 2015).

PD predominately affects older adults. Deloitte Access Economics (2015) confirms that in Australia PD is the most common major movement disorder and the second highest prevalence neurodegenerative condition (after Alzheimer's disease). The estimated prevalence is approximately 70,000 (one in every 340 people) with an economic cost to the country of over \$9.9 billion. In 2014, there were 11,900 new cases of PD diagnosed; this rate is expected to grow by 4% per annum over the next 20 years, compared to the general population growth rate of 1%, due to the aging population.

### Purpose

Group singing is a non-pharmacological, low cost, community-based activity that has been found to improve HRQoL (Clift & Hancox, 2010; Judd & Pooley, 2013) across a variety of populations: mental health (Tavormina, Tavormina, & Nemoianni, 2014), cancer (Gale, Enright, Reagon, Lewis & Deursen, 2012) and neurological conditions including Alzheimer's disease (Simons-Stern, Budson & Ally, 2010), dementia (Osman, Tischler & Schneider, 2014) and stroke (Tamplin, Baker, Jones, Way, & Lee, 2013; Tomaino, 2012). The aim of this study was to explore the effects of group singing on HRQoL for people diagnosed with PD.

## **Methodology**

Eleven participants (mean age 70.6 years) with a formal diagnosis of PD were recruited from an existing community singing group specifically created for people with PD, their carers and family members. Participants presented with mild to moderate severity of MS and disability (Hoehn and Yahr stage (frequency): level I (6), level II (3) and level III (2)) and moderate to very severe NMS burden (NMSB; (frequency): moderate (4), severe (5) and very severe (2)) and low to significantly impacted HRQoL (Parkinson Disease Questionnaire-39 scores ranged from 6.93 to 43.59).

Interpretive Phenomenological Analysis (IPA; Smith, 1996), a qualitative methodology well established in the field of health psychology (Brocki & Wearden, 2006), informed the data collection and analysis. To ensure research rigour, the recommendations of the Consolidated Criteria for Reporting Qualitative Studies (COREQ; Tong, Sainsbury & Craig, 2007) were incorporated into the research design. Participants' perceptions of the effect of group singing on their HRQoL were captured in a semi-structured interview designed for this research.

## **Results**

All participants reported improved wellbeing since attending the choir and a desire to recommend the singing group to others with PD. The results of the IPA analysis revealed six themes that characterised the effects of group singing: physical, mood, cognitive functioning, social connectedness, 'flow-on' effects, and sense-of-self. All participants reported positive effects across at least four of these themes. Three participants reported a negative effect in at least one theme (physical, mood or sense-of-self). The most common sub-themes reported by participants were related to social connectedness, with all participants reporting camaraderie and new friendships as important aspects of attending the choir. Other sub-themes, identified by the majority of participants, included improved voice quality, raised energy levels, PD-

specific choir, enhanced mood, increased self-confidence and greater control over day-to-day activities. Three factors were identified as important in the success of the choir: the Choir Maestro, PD-carer support group, and a PD-specific choir.

### **General conclusions and implications**

This study is unique for the following reasons. It is the only study to use a qualitative methodology to examine group singing and HRQoL in participants regularly attending a choir specifically established for people with PD, their carers and family members. It is the only study to report on the cognitive benefits of group singing in a PD specific choir, and the only study to report the duration of the effects across the domains of physical (body and voice), mood and cognitive functioning. Furthermore, this research has revealed both positive and negative effects of group singing, whereas previous studies have not reported on the latter in a PD specific choir. Participants reported multiple benefits from engagement in group singing that counteracted many of the negative effects of PD, suggesting that group singing has the ability to ‘give back’ some of what PD ‘takes away’.

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