

Choir Singing and Social Wellbeing

Relations between Resilience, Neuroticism & Cohesion in art and popular music choirs

Introduction

Research on effects of choral singing on wellbeing mostly presents striking correlations or interview results with positive relations to health. Drawing on the WHO definition of health as "a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity" (M), Clift et al. asked a huge intercultural sample of choir singers for effects of choral singing on physical health (E). Choristers identified benefits connected to four areas: breathing and lung function, posture and body control, relaxation and stress relief and physical activity and energy.

Although not asked for, some results were also linked to social benefits as is part of the holistic bio-psycho-social perspective of the WHO. Davidson impressively shows the importance of singing across lifespan in relation to its social functions and benefits - from stable infants bonding and learning of language via social empowerment in the relations of different generations up to improved cognitive activity with aged Alzheimer's disease patients (G). The social effects of group singing are described to be of social bonding between the choristers, pride for social contribution and personal recognition as well as forging social relationships, social connectedness and, of course, "feelings of being in a better holistic state of positive health and wellbeing" (E).

Since having a social network is one pillar of health and wellbeing (L), the present paper endeavors to find evidence for lay singers participating in choral singing to enhance and maintain their social network and more or less deliberately seek to use social cohesion (D) for stabilizing wellbeing. A part of stable wellbeing is a strong resilience which is defined as the ability to 'bounce back' or recover from stress (K) and has found to be associated with good health (F), low high-risk behavior (A) and being protective against mental illnesses (H). This indicates for resilience to have connections to low scores of neuroticism, which is itself associated with health issues (B). The connection between cohesion and resilience is to be explored here.

Method

Following factors have been included into a questionnaire to be answered on 5-point-Likert-scales:

Cohesion: 5 ATG-items (attraction to group) and 4 GI-items (group integration) from the GEQ (D) and 3 GEQ-Youth-items (I), all reworded to the choir context

Neuroticism: factor N items from the NEO-FFI (J)

Resilience: 10 CDRISC-items (C) and 6 BRS-items (K)

Additionally, questionnaires for age and education (o-level, a-levels, university degree) have been included. The sample consists of members from five choirs from the city of Weimar, Germany.

choir	1	2	3	4	5
n	13	21	10	40	15
age (mean/sd)	24/3,3	52,2/13	40,3/14,7	33,5/10,3	37,9/7,1
sex n (m/f)	5/8	8/13	2/10	9/31	5/10
style	art music	art music	art music	pop. music	pop. music

Item answers from 99 valid questionnaires were combined to the factors

Res: resilience (CDRISC+BRS items)

Coh: cohesion (ATG+GI+GEQ_{youth} items)

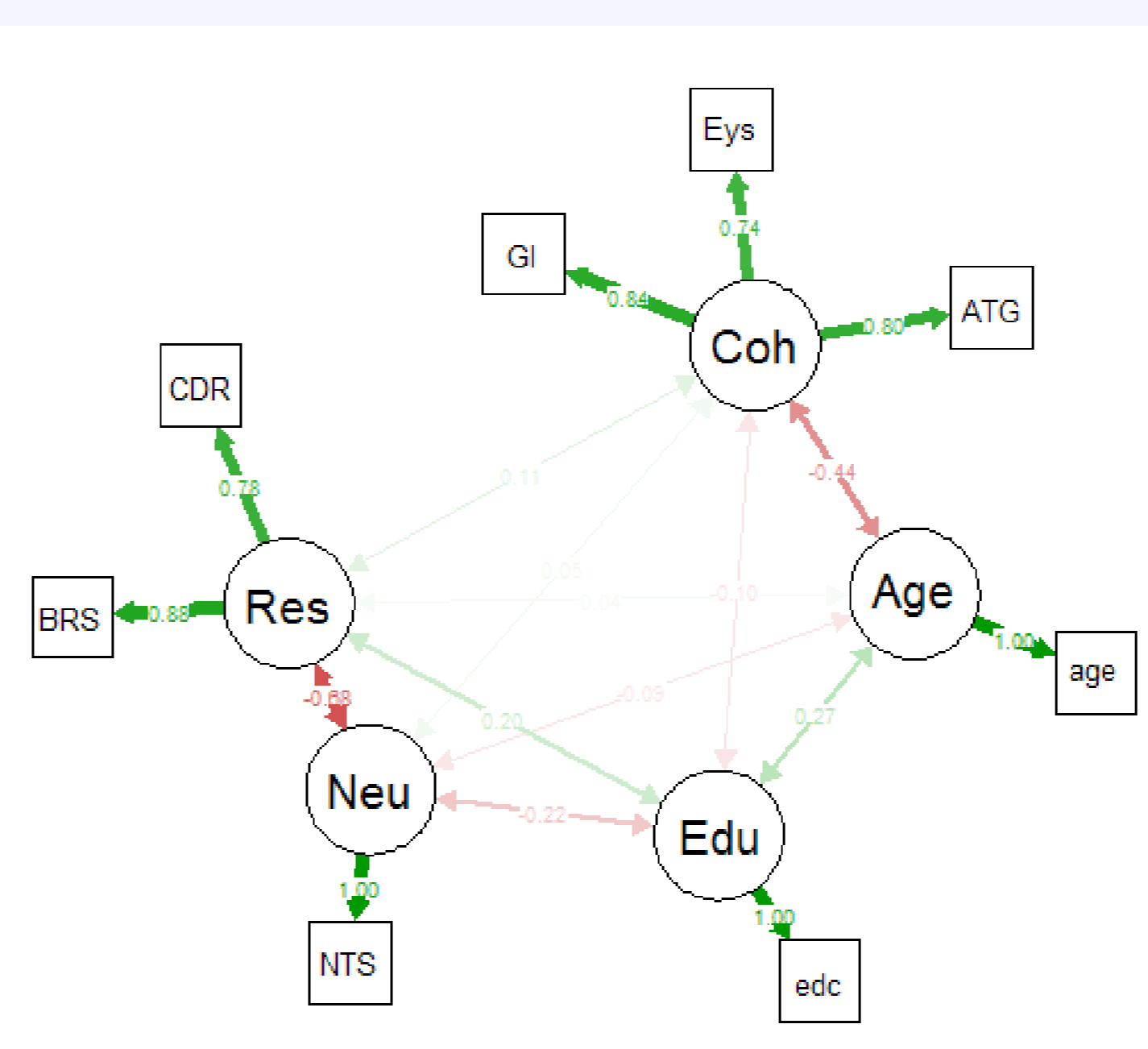
Neu: neuroticism (separated T-scores for male/female German population)

Edu: education (ordinal 3-step)

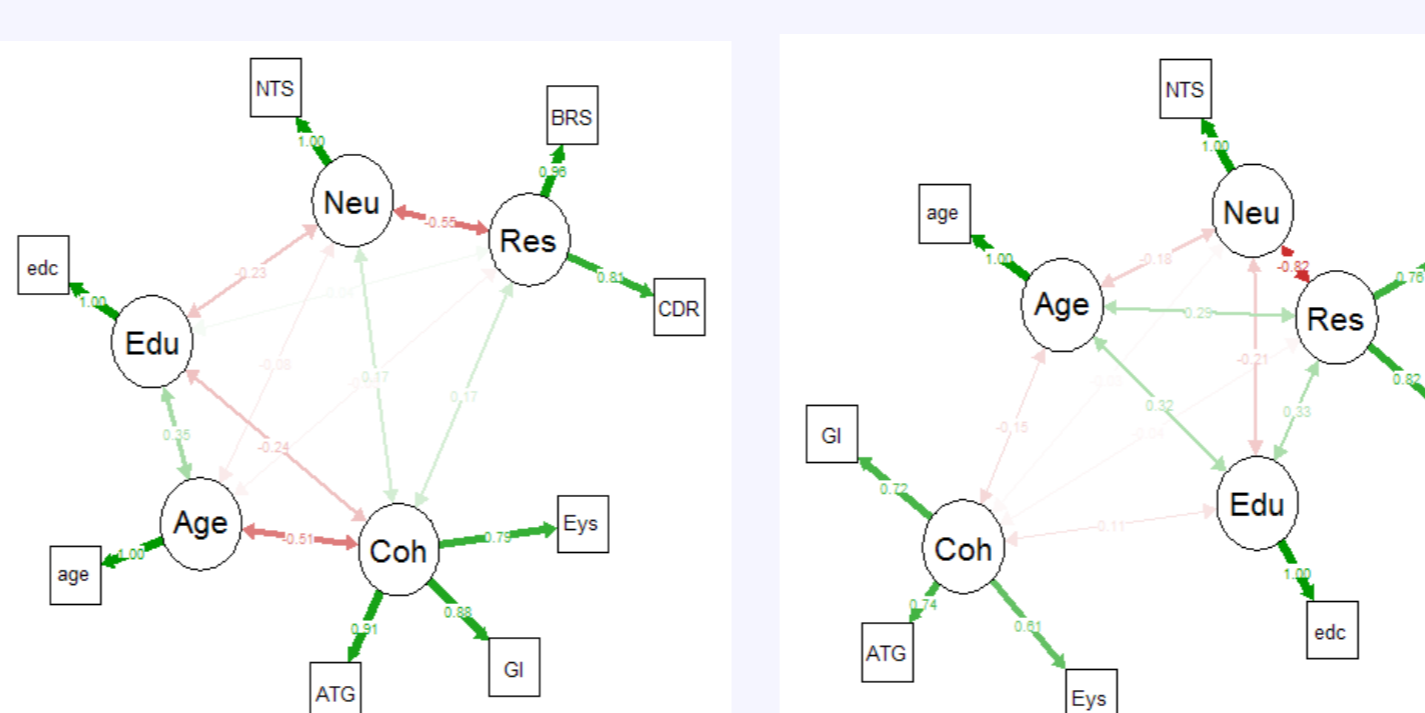
Age: age (continuous data)

The data has been z-transformed and the factors have been included into Structural Equation Models (SEM), using robust standard errors for estimating model parameters known to be non-normal (N).

Results



SEM1 All choristers
 $\chi^2=17.621, p=0.1725, df=13$



SEM2a Art Music choristers
 $\chi^2=15.001 | p=0.307, df=13$

SEM2b Popular Music choristers
 $\chi^2=22.486 | p=0.048 | df=13$

(1) The model of all choristers (SEM1) confirms a positive but infirm relation between cohesion and resilience.

(2) Neuroticism is very negatively associated with resilience.

(3) With increasing age the impact of cohesion, neuroticism and resilience decreases.

(4) Cohesion on group level seems to be of higher influence on the model than attraction to group.

(5) The BRS seems to be of higher influence on the model than the CDRISC.

(6) In the art music choirs the relations cohesion-resilience and cohesion-neuroticism are of higher values than in SEM1.

(7) In the art music choirs - in contrast to (4) - the ATG factor of cohesion exceeds the GI factor.

(8) In the popular music choirs cohesion seems to be of no relation to resilience or neuroticism - but more data is necessary for confirmation ($p < 0.05$).

Summary

In the context of choral activities cohesion and resilience are positively connected. The music style in combination with the attraction of group factor of cohesion may play an explanatory role in the beginning of a choir membership and may decrease its influence over group processes evolving.

Future research should further explore the impact of group processes on health issues in the context of amateur music making. Special focus may lay on membership durations and age effects as well as the differentiation between the ATG and the GI factors of cohesion over time.

References

- (A) Ahern, Kiehl, Sole, Byers (2006): A review of instruments measuring resilience. in: Issues in Comprehensive Pediatric Nursing 29. 103-125
- (B) Borkenau, P. & Ostendorf, F. (2008): Neo-Fünf-Faktoren-Inventar nach Costa und McCrae. 2., neu normierte und vollständig überarbeitete Auflage. Manual. Hogrefe
- (C) Campell-Sills & Stein (2007): Psychometric Analysis and Refinement of the Connor-Davidson Resilience Scale (CD-RISC): Validation of a 10-Item Measure of Resilience. Journal of Traumatic Stress, Vol. 20/6
- (D) Carron, A. V. & Brawley, L. R. (2012): Cohesion: Conceptual and Measurement Issues. in: Small Group Research. 43. 726-743
- (E) Clift, Hancox, Morrison, Hess, Kreutz, Stewart (2009): What do singers say about the effects of choral singing on physical health? Findings from a survey of choristers in Australia, England and Germany. in: Proceedings of the 7th Triennial Conference of ESCOM. available at http://www.whitstablechoral.org.uk/wp-content/uploads/2009/10/microsoft_word_clift_et_al_what_do_singers_say_escm_conference_paper.pdf
- (F) Conner & Davidson (2003): DEVELOPMENT OF A NEW RESILIENCE SCALE: THE CONNOR-DAVIDSON RESILIENCE SCALE (CD-RISC). in: DEPRESSION AND ANXIETY 18. 76-82
- (G) Davidson (2008): Singing for self-healing and wellbeing. Keynote at the inaugural ArtsHealth Conference in Newcastle, October 2008. available at [http://www.researchgate.net/publication/241297410_Singing_for_self-healing_health_and_wellbeing\(PDF\)orhttp://thecreativeleadershipforum.com/creativity-matters-blog/2009/8/17/singing-for-self-healing-health-and-wellbeing.html](http://www.researchgate.net/publication/241297410_Singing_for_self-healing_health_and_wellbeing(PDF)orhttp://thecreativeleadershipforum.com/creativity-matters-blog/2009/8/17/singing-for-self-healing-health-and-wellbeing.html) (HTML)
- (H) Dong, Nelson, Shah-Haque, Khan, Ablah (2013): A Modified CD-RISC: Including Previously Unaccounted for Resilience Variables. in: Kansas Journal of Medicine 6(1). 11-20
- (I) Eys, M.; Loughhead, T.; Bray, S. R. & Carron, A. V. (2009): Development of a Cohesion Questionnaire for Youth: The Youth Sport Environment Questionnaire. in: Journal of Sport and Exercise Psychology. 31. 390
- (J) Ostendorf, F. & Angleitner, A. (2004): NEO-Persönlichkeitsinventar nach Costa und McCrae. Manual. Hogrefe
- (K) Smith, Dalen, Wiggins, Tooley, Christopher, Bernard (2008): The Brief Resilience Scale: Assessing the Ability to Bounce Back. in: International Journal of Behavioral Medicine, 15. 194-200
- (L) Whitehead & Dahlgreen (2006): Concepts and principles for tackling social inequities in health: Levelling up Part 1. Studies on social and economic determinants of population health, No. 2
- (M) WHO (1946) - The WHO definition of health is to be found in the: Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19-22 June, 1946, p.1, available at http://www.who.int/governance/eb/who_constitution_en.pdf
- (N) Rosseel, Y. (2012): lavaan: An r package for structural equation modeling. in: Journal of Statistical Software 48(2). 1-36