CHORAL SINGING AS A MEANS OF INCREASING WELLBEING IN YOUTH AND ADULTS: PRISMA REVIEW

ZBOROVSKO PETJE KOT SREDSTVO SPODBUJANJA BLAGOSTANJA PRI MLADIH IN ODRASLIH – PRISMA

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Abstract: This study investigates how choral singing enhances wellbeing in adolescents and adults compared to other leisure activities. Despite extensive research on the benefits of choral singing for adults, its impact on adolescent wellbeing is less understood. The study examines the psychological, social, emotional, cognitive, and physical benefits of choir participation.

A comprehensive search across various databases identified 1,377 papers, with 12 studies meeting the inclusion criteria: mixed-method ($n = 5$), qualitative ($n = 1$), and quantitative ($n = 6$). The studies included a diverse age range, categorized into predominantly adolescents ($n = 4$) and predominantly adults ($n = 8$).

Psychological wellbeing was the most frequently studied dimension, highlighting enhanced quality of life, life satisfaction, and motivation. Social wellbeing, emphasizing identity, social connectedness, and inclusion, was also prominent. Emotional wellbeing improvements included better mood and stress reduction. Cognitive benefits such as increased focus and improved musical skills were evident, alongside physical benefits like improved vocal health and fitness.

The review highlights the unique advantages of choral singing over solo singing and other activities, especially in social and psychological aspects. The scarcity of adolescent-focused research suggests a need for further studies, including longitudinal research, to explore the long-term effects of choir participation on youth wellbeing.

Keywords: choral singing, wellbeing, adolescents, adults, stimulating musical environment, PRISMA

Izvleček: Pričujoča raziskava raziskuje, kako zborovsko petje izboljšuje blagostanje pri mladostnikih in odraslih v primerjavi z drugimi prostočasnimi dejavnostmi. Kljub obsežnim raziskavam o koristih zborovskega petja za odrasle je njegov vpliv na blagostanje mladostnikov manj razumljen. Raziskava preučuje psihološke, socialne, čustvene, kognitivne in fizične koristi sodelovanja v zboru. Obsežno iskanje po različnih bazah podatkov je identificiralo 1.377 člankov, od katerih je 12 raziskav izpolnjevalo merila za vključitev: mešane metode ($n = 5$), kvalitativne ($n = 1$) in kvantitativne ($n = 6$). Raziskave so vključevale raznolike starostne skupine, ki so bile razvrščene v pretežno mladostnike ($n = 4$) in pretežno odrasle ($n = 8$). Psihološko blagostanje je bila najpogosteje preučevana dimenzija, ki poudarja izboljšano kakovost življenja, življenjsko zadovoljstvo in

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motivacijo. Socialno blagostanje, ki poudarja identiteto, socialno povezanost in vključenost, je bilo prav tako pomembno. Izboljšanje čustvenega blagostanja je vključevalo boljše razpoloženje in zmanjšanje stresa. Očitne so bile kognitivne koristi, kot so povečana osredotočenost in izboljšane glasbene veščine, poleg fizičnih koristi, kot sta izboljšano zdravje glasu in telesna pripravljenost. Pregled literature poudarja edinstvene prednosti zborovskega petja v primerjavi s solo petjem in z drugimi dejavnostmi, zlasti na področju socialnih in psiholoških vidikov. Pomanjkanje raziskav, osredotočenih na mladostnike, kaže na potrebo po nadaljnjih raziskavah, vključno z longitudinalnimi raziskavami, v katerih bi raziskali dolgoročne učinke sodelovanja v zboru na blagostanje mladih.
Ključne besede: zborovsko petje, blagostanje, mladostniki, odrasli, stimulativno glasbeno okolje, PRISMA

INTRODUCTION

The significance of wellbeing, particularly in the context of choral singing, has gained prominence since the development of the psychological wellbeing model by Ryff (1989). This model aimed to address the neglected aspect of positive functioning, emphasizing life satisfaction, self-actualization, emotional stability and happiness for mental health. Music's positive impact on the wellbeing of individuals across different age groups is well-documented. Research conducted in the fields of mental health, psychology, arts, music and communication supports that community music activities, specifically choral singing, contribute to emotional, psychological and social wellbeing (Damsgaard & Jensen, 2021; Williams et al., 2018). Engagement in group singing has been shown to enhance the wellbeing of adults, including mental health, emotional-social benefits and self-efficacy (Livesey et al., 2012).

Despite the findings of studies on the wellbeing of choral singing for adults, there remains a gap in research concerning the impact of choral participation on the wellbeing of adolescents. This systematic review aims to synthesize published literature related to the wellbeing of adolescents and adults engaged in choral singing. Specifically, it seeks to explore how choral singing contributes to psychological, social, emotional, cognitive and physical wellbeing in both age groups. Additionally, the unique benefits of singing in a choir compared to other leisure activities (group and individual) will be examined, as well as the long-term effects of active involvement in choral singing on the holistic wellbeing of youth. The review will also investigate the effects of active participation in choral singing on the overall wellbeing and life satisfaction of young individuals, addressing aspects that have not been explored in previous research. By identifying the characteristics and strategies employed in selected studies, this review aims to provide valuable insights into the significance

of being in a choir for adolescents and to encourage their participation. The research goal is to offer a more comprehensive understanding of the multifaceted impacts of choral singing on wellbeing across different demographics.

Based on theoretical outcomes we set two research questions:

- How does choral singing contribute to psychological, social, emotional, cognitive and physical wellbeing of adolescents and adults?
- What are the unique benefits of singing in a choir compared to other leisure (group and individual) activities?

METHOD

Our review followed a five-stage framework by Arksey and O'Malley (2005), complemented by the *PRISMA 2020 statement: An updated guideline for reporting systematic reviews* (27-item checklist) (Page et al., 2020). This strategic approach aimed to systematically examine and identify gaps in the existing literature pertaining to the holistic wellbeing of adolescents participating in choir singing. Our objectives included: (i) comprehensive exploration of the literature on adolescent wellbeing in choir contexts, (ii) assessment of the feasibility and relevance of a systematic review, (iii) detailed presentation of findings for effective dissemination, and (iv) the identification of research gaps (Arksey & O'Malley, 2005). Through this method, we sought to facilitate a nuanced examination of various aspects of wellbeing for both adolescents and adults engaged in choir singing, ultimately contributing to a more holistic understanding of the subject.

Identifying Relevant Studies

In order to include and identify relevant studies for the purpose of this systematic review (PRISMA, 27-item checklist) (Page et al., 2020), the *eligibility criteria* was constructed (Table 1), considering the following items: participants, concept, context and evidence sources. Reviewed studies in this systematic review were collected through multiple sources, using online databases (Elsevier, MEDLINE, ERIC), as well as a manual search through other sources, including websites: Academia.edu, ResearchGate, SageJournals, PubMed, Frontiers; and journals: *Musicae Scientiae*, *Psychology of Music*, *The Journal of The Royal Society for the Promotion of Health*, *Music and Health*, *Psychological Topics*, *Journal of Research in Music Education*, *Journal of Public Mental Health*, *Integrative Physiological and Behavioral Science*, *Journal of Applied Arts and Health*, and *Musikpsychologie*.

Table 1
Eligibility criteria

Item	*Inclusion criteria*	*Exclusion criteria*
Participants	Healthy individuals	Unhealthy individuals (clinical conditions)
	Professional and amateur musicians	Sample without group of choral singers
	Adolescent and adult choir singers	Children under 12 years old
	Single-group design (no comparison group)	Only individual singing
	Studies with comparison group (including choir singers)	
Concept	Studies that address wellbeing of healthy individuals singing in a choir	Any kind of clinical context Virtual singing due to COVID-19
Context	Psychological, social, emotional and physical wellbeing	
Evidence sources	Studies published in the English language	Non-English language studies
	Qualitative, quantitative and mixed method approaches	Case studies
	Studies published from 2001-2023	Studies published before 2000

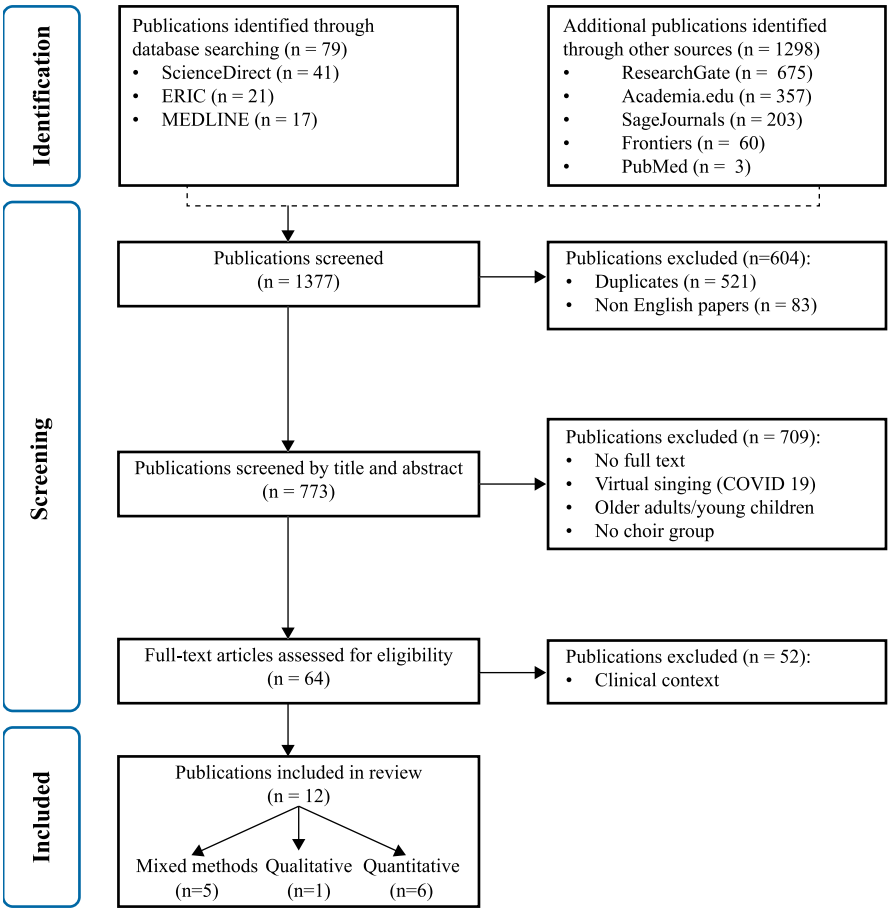
Inclusion Criteria for the Selected Studies

After gathering the studies, titles and abstracts were reviewed to determine their suitability and alignment with the eligibility criteria (Table 1). The next step involved excluding studies that did not meet the specified criteria for inclusion. Subsequently, full-text papers were obtained to gather all necessary information for further systematic analysis. If certain studies did not align with the research concept, context, or sample criteria, they were also eliminated. This process resulted in a final selection of papers to be included in the systematic analysis (Figure 1).

Charting the Data

The extracted information encompassed crucial details: the primary author's name and publication year, the study's title, the methods employed for data collection (including types of questionnaires, interviews, or other forms of data gathering), the study design and methodologies utilized, the characteristics of participants or communities (size, age and whether they participated in group or solo singing), the research objectives, the specifics of singing engagement (including frequency), various aspects of wellbeing considered and the principal findings derived from the studies.

Figure 1:
Flow diagram for study selection



In order to determine the predominant wellbeing aspects that were frequently assessed, a comprehensive examination of the benefits associated with choir participation was conducted. These benefits were categorized into five distinct domains: *psychological, social, cognitive, physical/physiological* and *emotional wellbeing* (Table 2). This categorization aimed to explore the most frequently measured dimensions of wellbeing, providing valuable insights into the multifaceted impact of choir engagement on individuals' holistic wellbeing.

Considering our challenge in identifying a substantial number of studies solely encompassing adolescents and the fact that many studies involve both adolescents and adults, we categorized them into two semi-homogenous groups. The first category includes studies *predominantly* focusing on *adolescents* as their primary sample, while the second category centres around studies

Table 2:
Summary of studies regarding wellbeing aspects

Wellbeing aspect	Description	Studies
Psychological wellbeing	Enhanced quality of life Life satisfaction Sense of purpose Sense of accomplishment Personality Motivation	1. Acquah (2016) 2. Clift and Hancox (2001) 3. Clift et al. (2010) 4. Fernández-Herranz et al. (2022) 5. Good and Russo (2021) 6. Jozić and Butković (2023) 7. Linnemann et al. (2017) 8. Livesey et al. (2012) 9. Lonsdale and Day (2020) 10. Maltschweiger and Sattmann (2016) 11. Parker (2014) 12. Stewart and Londsdale (2016)
Cognitive wellbeing	Increased focus Musical skills Improves concentration and memory Competence	1. Acquah (2016) 2. Clift et al. (2010) 3. Fernández-Herranz et al. (2022) 4. Livesey et al. (2012) 5. Lonsdale and Day (2020) 6. Maltschweiger and Sattmann (2016) 7. Stewart and Londsdale (2016)
Social well-being	Sense of belonging Social inclusion Social identity Positive relationships SDT	1. Acquah (2016) 2. Clift and Hancox (2001) 3. Clift et al. (2010) 4. Fernández-Herranz et al. (2022) 5. Good and Russo (2021) 6. Jozić and Butković (2023) 7. Linnemann et al. (2017) 8. Livesey et al. (2012) 9. Lonsdale and Day (2020) 10. Parker (2014) 11. Stewart and Londsdale (2016)
Physical/ physiological wellbeing	Controlled breathing Improved posture Mobility benefits Vocal health Benefits for heart and immune system	1. Acquah (2016) 2. Clift and Hancox (2001) 3. Clift et al. (2010) 4. Fernández-Herranz et al. (2022) 5. Livesey et al. (2012)
Emotional wellbeing	Enhanced positive emotion (Improved mood) Reduced negative emotion (less stressed, relieved tension) Energized Calming/relaxation	1. Acquah (2016) 2. Clift and Hancox (2001) 3. Clift et al. (2010) 4. Fernández-Herranz et al. (2022) 5. Good and Russo (2021) 6. Jozić and Butković (2023) 7. Linnemann et al. (2017) 8. Livesey et al. (2012) 9. Lonsdale and Day (2020) 10. Maltschweiger and Sattmann (2016)

predominantly involving *adult* participants. This differentiation allows for a comprehensive examination of the distinct wellbeing outcomes associated with choral singing within these groups.

Collating, Summarizing and Reporting the Results

The study selection process involved an initial search across databases/online platforms and found 1,377 studies. After systematic screening and elimination of irrelevant studies, 773 articles were refined. Subsequent detailed reviews and exclusion based on incompatible research contexts and criteria led to a final selection of 12 studies for the systematic review.

RESULTS

Publication Characteristics

The initial search process generated 1,377 papers (using key words) from different online sources: (i) databases ($n = 79$), including Elsevier, ERIC and MEDLINE; (ii) other online sources ($n = 1298$), including *ResearchGate, Academia.edu, SageJournals, Frontiers* and *PubMed*. Through screening involving title and abstract assessment, elimination of duplicates and exclusion of non-English publications, the list was refined to 773 articles. Subsequent review of these 773 articles led to the exclusion of 709 due to the incompatible context of the research (i.e. COVID-19, virtual singing), no access to full text, studies that focus only on older adults or young children as participants and missing the choir group in the research.

Analysis of the full text was conducted on the remaining 64 studies that, so far, met all methodological criteria. After the review of the full text of the studies, 52 were excluded due to clinical context (e.g. interventions, unhealthy individuals, choir singing activity as a treatment for various health issues). The remaining 12 studies were subjected to rigorous examination and their detailed characteristics, methodologies and findings are systematically outlined (Figure 1). All reviewed studies include 3 methodological approaches: *mixed-method* ($n = 5$), *qualitative* ($n = 1$) and *quantitative* ($n = 6$).

Participants' Characteristics

In the 12 studies examined, the number of participants varied from 9 to 1,124. Out of the total 12 studies, 5 employed *mixed methods* (with participants ranging from 84 to 1,124), 1 *qualitative* (with 39 participants) and 6 *quantitative* approaches (ranging from 9 to 375 participants).

The age of participants ranged from 12 to 95 years old. For three studies, exact age data were not available, although the participants were predominant-

ly adolescents and members of university choirs. Most studies encompassed a wide age range, indicating heterogeneous groups. Consequently, we categorized the samples into *predominantly adolescents* ($n = 4$) and *predominantly adults* ($n = 8$).

It is essential to highlight that all 12 studies included choral singers as a focal group in their research, regardless of other comparison groups mentioned in the studies. In studies involving adolescents, there was no specific control group and the participants were mainly university choir members. In studies involving mainly adults, three studies included a comparison group to assess wellbeing outcomes. The first study (Londsdale & Day, 2020) compared: (a) choir singers with other leisure activities, (b) solo singers, (c) band members, (d) solo instrumentalists, (e) team athletes, and (f) individual athletes. In the second study (Stewart & Lonsdale, 2016) comparisons were made between (a) choral singers, (b) solo singers, and (c) team athletes. The third study (Maltschweiger & Sattmann, 2016) assessed differences between: (a) choirs, (b) theatre groups, (c) brass band members, and (d) concert listening groups. Some studies explored gender differences and distinctions between group and individual singing, providing a comprehensive examination of choral singing's impact on wellbeing, depending on the context provided.

Singing Characteristics

The characteristics of singing, specifically frequency (how often individuals engaged in singing), were measured in the selected studies. However, out of the 12 studies, 6 (50%) of them did not provide data regarding the singing frequency. The remaining 6 studies included individual responses and reported the frequency of singing engagement: three studies (25%) reported singing once a week for 2 hours (Clift & Hancox, 2001); one study (8.3%) reported singing three times per week for one hour (Acquah, 2016); one study (8.3%) had a randomized sample and provided various answers: less than an hour per day/several hours per day (Parker, 2014). Also, one study (Jozić & Butković, 2023) that was included in this systematic review gathered data from 221 participants (randomized sample) and provided data regarding singing frequency: once in two weeks was the most frequent answer – 104 (47.1%); once a month – 56 (25.3%); once a week – 41 (18.6%); every day – 14 (6.3%); 2-3 times a week – 6 (2.7%).

IMPLEMENTATION, CHARACTERISTICS AND STRATEGIES

Contextual Components

Analysing the variables measured in the 12 chosen studies, we identified five distinct dimensions of wellbeing linked to choral singing, as illustrated in Ta-

ble 2. In each of the 5 wellbeing aspects, various components were taken into account to provide more detailed descriptions of wellbeing dimensions that were explored in the reviewed studies. In terms of study goals, results show that each study covered more than one aspect of wellbeing.

Psychological wellbeing was one of the dominant areas in all (100%) of the reviewed studies, encompassing facets such as enhanced quality of life/life satisfaction (Acquah, 2016; Clift & Hancox, 2001; Clift et al., 2010; Good & Russo, 2021; Jozić & Butković, 2023; Livesey et al., 2012; Londsdale & Day, 2020; Maltschweiger & Sattmann, 2016; Stewart & Londsdale, 2016), sense of purpose (Clift & Hancox, 2001; Livesey et al., 2012), sense of accomplishment (Fernández-Herranz et al., 2022; Londsdale & Day, 2020; Parker, 2014), personality (Londsdale & Day, 2020), and motivation (Jozić & Butković, 2023; Linnemann et al., 2017; Stewart & Londsdale, 2016).

Cognitive wellbeing was explored in seven (58.3%) of the reviewed studies, including the aspects: increased focus/concentration (Clift et al., 2010; Linnemann et al., 2017; Livesey et al., 2012), improved musical skills (Acquah, 2016; Fernández-Herranz et al., 2022; Livesey et al., 2012; Maltschweiger & Sattmann, 2016), and a greater sense of competence (Livesey et al., 2012; Londsdale & Day, 2020; Maltschweiger & Sattmann, 2016; Stewart & Londsdale, 2016).

Social wellbeing was one of the focus areas in eleven (91%) of the reviewed studies, including: a sense of belonging/feel like a part of a group/social inclusion (Acquah, 2016; Clift & Hancox, 2001; Clift et al., 2010; Fernández-Herranz et al., 2022; Good & Russo, 2021; Linnemann et al., 2017; Livesey et al., 2012; Londsdale & Day, 2020; Parker, 2014; Stewart & Londsdale, 2016), identity (Livesey et al., 2012; Londsdale & Day, 2020; Parker, 2014), positive relationships (Acquah, 2016; Londsdale & Day, 2020), and elements from Self-Determination Theory – SDT (Londsdale & Day, 2020; Stewart & Londsdale, 2016).

Physical/physiological wellbeing was explored in five (41.6%) of the reviewed studies, addressing controlled breathing (Acquah, 2016; Clift & Hancox, 2001; Linnemann et al., 2017; Livesey et al., 2012), improved posture/mobility benefits/in shape (Clift & Hancox, 2001; Fernández-Herranz et al., 2022; Livesey et al., 2012), vocal health (Livesey et al., 2012), and advantages for the immune system (Clift & Hancox, 2001; Livesey et al., 2012).

Emotional wellbeing was explored in ten (83.3%) of the reviewed studies reflecting improved mood/reduced stress/feelings of calmness and relaxation/energized (Acquah, 2016; Clift & Hancox, 2001; Clift et al., 2010; Fernández-Herranz et al., 2022; Good & Russo, 2021; Linnemann et al., 2017; Livesey et al., 2012; Maltschweiger & Sattmann, 2016).

Psychological, social and *emotional wellbeing* were the primary areas of focus across the majority of the reviewed studies, showcasing the multifaceted impact of choral singing on participants' holistic wellbeing.

STUDY OUTCOMES

Summary of outcomes (Page 143), including: *author and year, study design, data collection* and *key findings* – shows outcome of each study.

Outcomes were summarized in 6 quantitative studies (50%), 5 mixed method studies (41.6%) and 1 qualitative study (8.3%). Aspects of the outcomes included: life satisfaction (SWL), quality of life (QoL), and physical, emotional, cognitive, psychological and social benefits.

Instruments

Instruments that were used for assessing wellbeing and collecting the data varied in all of the 12 reviewed studies. Three (25%) studies did not explicitly provide information on which type of questionnaires and scales were used. The remaining 9 studies used various instruments to measure wellbeing. Most studies used multiple research instruments to measure specific wellbeing. Outcomes and data collection are presented in Table 3.

The Positive and Negative Affect Schedule (PANAS, n = 3) was employed in three studies (Good & Russo, 2021; Jozić & Butković, 2023; Maltschweiger & Sattmann, 2016) to assess *emotional wellbeing.* One of them additionally included saliva samples (Good & Russo, 2021). The Satisfaction With Life Scale (SWLS, $n = 2$) was measured in two studies (Jozić & Butković, 2023; Lonsdale & Day, 2020) to assess *cognitive wellbeing.* The World Health Organization Quality of Life Brief Version (WHOQOL-BREF, $n = 2$) was employed in two studies (Clift et al., 2010; Livesey et al., 2012), measuring *physical, psychological* and *social wellbeing.* Hedonic wellbeing (ExWB, $n = 2$) and the Multidimensional Mood Questionnaire (MDMQ, $n = 2$) were used in two studies (Londsdale & Day, 2020; Stewart & Londsdale, 2016) to assess *emotional wellbeing.* Subjective stress assessed using a single-item approach (SLS-1, $n = 1$) and subscale Perceived Available Support (PAS) from the Berlin Social Support Scale (BSSS, $n = 1$) were used in one study (Linnemann et al., 2017) to measure *emotional, psychological* and *social wellbeing.* The Mental Health Continuum–Short Form (MHC-SF), Need Satisfaction at Work Scale (NSa-WS), the Oxford Happiness Questionnaire–Short Form (OHQ-SF), the four-item Patient Health Questionnaire (PHQ-4), the Rosenberg Self-Esteem Scale (RSES), and 10-Item Personality Inventory (TIPI) were measured in one study (Londsdale & Day, 2020) to assess *emotional* and *psychological wellbeing.* The Brief Emotional Experiences Scale (BEES) was employed in one study (Clift et al., 2010), providing insights into the *emotional wellbeing* related to choral singing. The Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS), Self-regulation scale (SRQ-E), and Subjective Vitality Scale (SVS) were used in one study (Stewart & Lonsdale, 2016) to measure *emotional* and *psychological wellbeing.* The Perceived Stress Questionnaire (PSQ) and the State-Trait Anxiety Inven-

tory (STAI) were utilized in one study (Maltschweiger & Sattmann, 2016), focusing on the assessment of stress and anxiety levels as indicators of *emotional wellbeing*. The Choral Activity Perceived Benefits Scale (CAPBES) was used in one study (Fernández-Herranz et al., 2022) to measure *overall wellbeing*, specifically capturing perceived benefits related to choral activity. Five dimensions emerged from 22 items in the CAPBES scale: *satisfaction, ability, group engagement, belonging* and *optimism*.

Studies including adolescents and adults

Analysing studies mainly focused on adolescents ($n = 4$) that are examining various benefits from their involvement in choral singing reveals a variety of positive effects on their overall wellbeing.

In terms of *physical benefits*, two studies (Acquah, 2016; Clift & Hancox, 2001) pointed out improvements in posture, controlled/deep breathing and fitness, contributing to adolescents' overall health. *Emotional wellbeing* was a common thread in three studies (Acquah, 2016; Clift & Hancox, 2001; Parker, 2014), showcasing benefits such as boosted mood, stress reduction and increased self-confidence. Two studies (Acquah, 2016; Parker, 2014) examined *cognitive benefits*, emphasizing enhancements in musical skills and focused attention fostered by choir participation. *Social benefits* emerged as a common theme across all studies, highlighting the positive impact on social identity, friendships and teamwork, while the *spiritual benefits* were explicitly addressed in two studies (Acquah, 2016; Clift & Hancox, 2001), indicating a sense of connectedness and spiritual growth. One study (Linnemann et al., 2017) provided limited evidence for direct social benefits as a positive effect of choral singing. Overall, the synthesis supports a multifaceted understanding of the wellbeing benefits associated with adolescent choir participation.

The other eight studies ($n = 8$) primarily involved adults as participants who are engaged in choral singing and examined various aspects of wellbeing: *emotional, physical, psychological, social* and *cognitive*. Three studies (33.3%) highlight *emotional wellbeing* improvements such as: reduced anxiety, stress relief, and enhanced mood (Clift & Hancox, 2001; Livesey et al., 2012; Stewart & Lonsdale, 2016). Two studies (16.6%) emphasized *physical benefits*, including: improved respiratory and vocal health, enhanced physical fitness, and controlled breathing (Clift et al., 2010; Livesey et al., 2012). In two studies (16.6%), *psychological benefits* were identified, such as: oxytocin release and positive affect (Good & Russo, 2021; Stewart & Lonsdale, 2016). In terms of *social wellbeing*, benefits were found in three studies (33.3), including: social support, a sense of community, and enhanced social connection (Clift & Hancox, 2001; Livesey et al., 2012; Stewart & Lonsdale, 2016). *Cognitive benefits* are evident in two studies (16.6.%), highlighting brain stimulation, focused attention, and improved abilities (Clift et al., 2010; Jozić & Butković, 2023).

Studies with Comparison Groups

In three ($n = 3$) out of the twelve studies reviewed (33.3%), comparison groups were included, allowing for a comparative examination of the benefits associated with choir participation. These studies delved into the distinct outcomes and differences between individuals engaged in choral singing and those participating in other musical and non-musical activities. This comparative analysis contributes to a better understanding of the specific advantages and unique impacts of choral singing in contrast to other activities and conditions.

In the study conducted by Lonsdale and Day (2020), which had six comparison groups – (a) choir singing, (b) solo singing, (c) orchestra/band membership, (d) solo musicianship, (e) team sports participation, and (f) individual sports engagement – no significant differences were found in *psychological wellbeing* (happiness, anxiety, depression, self-esteem) among these groups. This study, using Self-Determination Theory, found that choir singers and team sports players reported higher levels of social *connectedness*, emphasizing a sense of belonging and shared goals. However, choir singers and team sports players reported lower *autonomy*, indicating less individual freedom compared to those engaged in solo activities or playing music in a band or orchestra. All groups, regardless of the activity, reported similar levels of *competence*, indicating that any activity providing opportunities for mastery and improvement can contribute to wellbeing. Overall, while choir singing may involve less individual autonomy, its unique social and communal aspects contribute positively to participants' wellbeing.

Stewart and Lonsdale (2016) explored the *psychological and social aspects* of (a) choral singing compared to (b) solo singing and (c) team sports. Choral singers, after rehearsal, reported oxytocin release, improved mood, positive affect and a sense of connection, shared goals, social bonding and togetherness. The study revealed that choral singers and team sports players reported higher *subjective wellbeing* than solo singers. Using also Self-Determination Theory, they found that solo singers scored higher in *autonomy*, but team sports players and choral singers scored higher in identified *regulation*. Choral singers considered their choirs more entitative than team sports players considered their teams. Perceived *entitativity* significantly predicted psychological wellbeing for both choral singers and team sports players. The study showed that choir singing offers unique benefits in terms of social connection, positive affect and entitativity compared to solo singing and team sports. However, *autonomy* levels were lower for choral singers, suggesting a potential trade-off between individual autonomy and social connection.

Maltschweiger and Sattmann (2016) investigated the *psychological and social benefits* of (a) choir participation, (b) theatre group involvement, (c) brass band membership, and (d) concert listening. Choir and theatre group participants reported greater satisfaction with rehearsals, positive affect and reduced stress compared to the brass band. Interestingly, the brass band experienced

the least benefit from rehearsals, while both the choir and theatre group benefitted the most. While there was not a significant positive change in emotions reported by the choir group, the theatre group had a more positive impact on mood, attributed to the physical activity involved. The study found a significant reduction in stress during rehearsals for the choir group, indicating the effectiveness of choir singing in stress reduction. Choir members reported decreased stress both before and during rehearsals. State of anxiety decreased in choir singers, but increased in the concert listening group. The likability of the rehearsed piece had a significant impact on increased wellbeing during rehearsals. In summary, choral singing, brass band participation and theatre group involvement were perceived as positive activities, with choir participants frequently reporting feeling better after rehearsals, which supports previous findings on the positive effects of choral singing on wellbeing.

DISCUSSION

Summary of Evidence

This systematic review aimed to explore the various effects of choral singing on the psychological, social, emotional, cognitive and physical wellbeing of adolescents and adults. The synthesis of 12 studies, encompassing a diverse range of methodologies and participant demographics, provides valuable insights into the various dimensions of wellbeing associated with choir participation.

In all studies, *psychological wellbeing* was a dominant focus, encompassing enhanced quality of life, life satisfaction, a sense of purpose, accomplishment, personality and motivation. *Cognitive wellbeing* was explored in seven studies (58.3%), emphasizing increased focus, improved musical skills and a greater sense of competence. *Social wellbeing* took centre stage in eleven studies (91%), addressing a sense of belonging, social inclusion, identity, positive relationships and elements from Self-Determination Theory (relatedness, autonomy and competence). *Physical/physiological wellbeing* was explored in five studies (41.6%), including controlled breathing, improved posture, vocal health and benefits for the immune system. *Emotional wellbeing* was a key area in ten studies (83.3%), reflecting improved mood, reduced stress, feelings of calmness and relaxation.

The instruments used in the 12 reviewed studies to assess wellbeing and collect data varied. While three studies did not explicitly provide information on the instruments used, the remaining nine studies employed a diverse range of measures: the Positive and Negative Affect Schedule (PANAS), Satisfaction with Life Scale (SWLS), World Health Organization Quality of Life Brief Version (WHOQOL-BREF), Hedonic Wellbeing (ExWB), Multidimensional Mood Questionnaire (MDMQ), Singers' Emotional Experienc-

es Scale (SEES) and instruments measuring stress and anxiety levels like the Perceived Stress Questionnaire (PSQ) and the State-Trait Anxiety Inventory (STAI). Each study used multiple instruments to measure specific aspects of wellbeing, contributing to a comprehensive understanding of the impacts of choral singing.

Reviewing and analysing studies on choral singing benefits for adolescents and adults reveals a range of positive effects on overall wellbeing. Studies focused on adolescents ($n = 4$) revealed positive effects on physical, emotional, cognitive and social wellbeing. Physical benefits included improvements in posture, controlled breathing and fitness. Emotional benefits encompassed boosted mood, stress reduction and increased self-confidence. Cognitive benefits emphasized enhancements in musical skills and focused attention. Social benefits highlighted positive impacts on social identity, friendships and teamwork. Spiritual benefits, indicating a sense of connectedness and spiritual growth, were explicit in two studies. Studies primarily involving adults ($n = 8$) demonstrated emotional wellbeing improvements, physical, psychological, social and cognitive benefits.

The synthesis supports a multifaceted understanding of the wellbeing benefits associated with both adolescent and adult choir participation. Differences and similarities across studies underscore the nuanced impact of choral singing on emotional, psychological, social, cognitive and physical wellbeing. Emotional benefits were consistently observed in both age groups, while physical benefits were more emphasized in adolescents. Social wellbeing emerged as a universal theme, indicating positive impacts on social identity, relationships and community connection. The cognitive benefits of increased focus and improved musical skills were evident across age groups. Overall, the comprehensive analysis reveals a rich tapestry of wellbeing dimensions influenced by choral singing across diverse demographic groups.

For adolescents ($n = 4$), physical improvements in posture, controlled breathing and fitness were noted (Clift & Hancox, 2001; Acquah, 2016), alongside emotional benefits like mood enhancement and stress reduction (Clift & Hancox, 2001; Acquah, 2016). Cognitive benefits, including enhanced musical skills and focused attention, were highlighted in two studies (Acquah, 2016; Parker, 2014). Socially, positive impacts on social identity, friendships and teamwork were consistent themes across all adolescent-focused studies. Spiritual benefits, indicating a sense of connectedness and growth, were explicitly addressed in two studies (Clift & Hancox, 2001; Acquah, 2016).

The other eight studies ($n = 8$) primarily involved adults as participants engaged in choral singing, exploring various dimensions of wellbeing: emotional, physical, psychological, social and cognitive. Three studies ($n = 3$) highlighted emotional wellbeing improvements, demonstrating reduced anxiety, stress relief and enhanced mood (Clift & Hancox, 2001; Livesey et al., 2012; Stewart & Lonsdale, 2016). Two studies ($n = 2$) emphasized physical benefits, including improved

respiratory and vocal health, enhanced physical fitness and controlled breathing (Livesey et al., 2012; Clift et al., 2010). In two studies ($n = 2$), psychological benefits were identified, such as oxytocin release and positive affect (Good & Russo, 2021; Stewart & Lonsdale, 2016). Regarding social wellbeing, three studies ($n = 3$) reported benefits, including increased social support, a sense of community and enhanced social connection (Clift & Hancox, 2001; Livesey et al., 2012; Stewart & Lonsdale, 2016). Cognitive benefits were evident in two studies ($n = 2$), highlighting brain stimulation, focused attention and improved abilities (Jozić & Butković, 2023; Clift et al., 2010). Research by Good and Russo (2021) highlights the psychological and emotional advantages of group singing, with increased oxytocin levels and reduced stress, emphasizing the unique benefits of choral singing over solo performances. One study (Fernández-Herranz et al., 2021) introduced the CAPBES (Choral Activity Perceived Benefits Scale), providing a structured instrument to define the various dimensions of choral singing benefits. Their findings underscore the psychological, cognitive, and social dimensions, emphasizing overall satisfaction, personal growth, improved abilities, and a sense of belonging. These consistent positive findings underscore the diverse positive impacts of choral singing on the overall wellbeing of adult participants.

In three (33.3%) of the twelve studies reviewed, comparison groups were employed to examine the unique benefits of choir participation. The first study (Lonsdale & Day, 2020), with six comparison groups, found no significant differences in psychological wellbeing between choir singers, solo singers, orchestra/band members, solo musicians and team or individual sports participants. Choir singers and team sports players reported higher social connectedness but lower autonomy. These findings suggest that the psychological benefits of choral singing may be more linked to its social and interpersonal aspects than its musical or individual nature. This aligns with the emphasis on group activities, like choir singing, fostering social connectedness, as noted in other studies (Maltschweiger & Sattmann, 2016; Stewart & Lonsdale, 2016). The second study (Stewart & Lonsdale, 2016) revealed that choir singers, after rehearsal, experienced improved mood, social bonding and higher subjective wellbeing than solo singers, although with lower autonomy. Additionally, choral singers demonstrate intrinsic motivation and report higher levels of wellbeing compared to solo singers and participants in team sports, emphasizing the unique advantages of group-based musical activities. Maltschweiger and Sattmann (2016) found that choir and theatre groups reported greater satisfaction and reduced stress compared to brass band members and concert listeners. Choir singing, particularly, proved effective in stress reduction. Participants reported feeling less stressed after engaging in group activities. This study emphasizes that satisfaction with the rehearsal in group activities, including choir singing, is linked to positive affect, providing relaxation and a positive distraction from everyday life. In summary, these studies highlight the social and psychological advantages of choir singing over solo singing, team sports and other musical activities.

Limitations

Our research aimed to predominantly concentrate on adolescents as the primary participant group; however, the limited availability of studies meeting this criteria necessitated the inclusion of studies involving adults in the sample. The inclusion criteria of English-language studies further narrowed the selection, potentially limiting the generalizability of findings. Additionally, some studies lacked comprehensive information on singing frequency and data collection instruments, introducing challenges for objective comparisons and analyses. Moreover, the methodological diversity, participant demographic variations, and disparate outcome measures across the selected studies pose a substantial challenge for direct comparisons. Another notable limitation is that only one person reviewed the studies, which may introduce a potential bias and could benefit from additional perspectives for a more comprehensive assessment.

CONCLUSION

This systematic review explored the effects of choral singing on the various dimensions, synthesizing findings from 12 selected studies, encompassing diverse methodologies and participants' demographics. The aim was to investigate in what ways choral singing contributes to different dimensions of wellbeing: psychological, social, emotional, cognitive and physical. We also wanted to identify differences in wellbeing level between adolescents and adults, as well as to explore predominant aspects of wellbeing frequently assessed in the literature.

Across all studies, in both adolescents and adults, choral singing demonstrated a consistent positive impact on psychological, social, emotional, physical and cognitive benefits. *Psychological wellbeing* emerged as a dominant focus ($n = 12$), with participants reporting enhanced quality of life, increased life satisfaction, a sense of purpose, accomplishment, improved personality traits, and higher motivation. These findings underscore the comprehensive psychological benefits associated with singing in a choir, which are consistent regardless of age group. *Social wellbeing* was explored in the eleven of the reviewed studies ($n = 11$) and the benefits included: a strong sense of belonging, social inclusion, identity formation, positive interpersonal relationships, and elements of Self-Determination Theory (higher competence, autonomy and relatedness). It highlights the power of choral singing activity in fostering social connectedness, strengthening community and social support networks. *Emotional wellbeing* was highlighted in ten studies ($n = 10$), with participants experiencing improved mood, reduced stress, feelings of calmness, and relaxation, which is crucial in reducing the negative impacts of everyday life stress and enhancing overall mental health. *Cognitive benefits* were documented in seven studies ($n = 7$), showing improvements in concentration, focus, musical skills,

memory, attention, and a greater sense of competence. These cognitive enhancements illustrate how engaging in choir activities can stimulate mental processes and contribute to cognitive wellbeing in individuals. Five studies ($n = 5$) examined *physical wellbeing*, identifying benefits such as controlled breathing, improved posture, lung function, heart health, mobility, respiratory and vocal health, physical fitness, and generally feeling more energized and active, as well as positive effects on the immune system.

The differentiation between studies focusing on adolescents and adults revealed nuanced differences. For studies including *mainly adolescents* ($n = 4$), choral singing was associated with significant physical improvements: better posture, controlled breathing and overall fitness, which were not prominent in adults' experiences. Cognitive benefits for adolescents were evident in enhanced musical skills, and focused attention, while these aspects were less emphasized in studies including adults. Adolescents reported that choral singing fosters a sense of identity, strengthens friendships and emphasizes teamwork. They have also experienced a unique sense of connectedness, spiritual growth, and a therapeutic and uplifting effect, indicating spiritual benefits from choral singing. In studies including *mainly adults* ($n = 8$), participants experienced primarily emotional wellbeing such as reduced anxiety, stress relief, and enhanced mood, indicating a greater emphasis on emotional regulation and stress management in this demographic. While both adults and adolescents report increased social support and a sense of community, adolescents may focus more on the formation of social identity and friendships, while adults may prioritize maintaining existing social connections. Overall, both age groups derive many significant benefits from choral singing, but there are specific outcomes reflecting the unique developmental stage and life contexts of adolescents and adults.

In three studies ($n = 3$), researchers used comparison groups in order to explore the benefits of choir participation compared to other leisure and group activities. The first study (Londsday & Day, 2020) involved six comparison groups: choir and solo singers, orchestra/band members, solo musicians, team sports players, and individual sports players. They wanted to explore whether the psychological wellbeing is unique to choirs, in comparison to the other mentioned activities. Results did not show any significant differences in psychological wellbeing between groups. However, distinct differences were observed in autonomy and relatedness between groups, with choir singers and team sports players reporting higher levels of relatedness compared to solo musicians and individual sport players. It suggests that the psychological benefits of choral singing may be explained through the social and interpersonal dynamics of the activity, rather than its musical nature or individual aspects. This study emphasized that group activities (such as choir singing) foster social connectedness in participants. All groups demonstrated a similar level of competence, suggesting that any group activity that promotes mastery can positi-

vely affect wellbeing. The second study (Stewart & Londsdale, 2016) used three groups – choir singers, solo singers and team sports players – to explore psychological and social wellbeing aspects associated with choir participation. The aim was to examine how different activities influenced participants' mood, social bonding, and their subjective wellbeing. Results indicated that the choir singers group experienced notable improvements in mood, social connectedness and subjective (hedonic) wellbeing after the rehearsals, distinguishing them from both solo singers and team sports players. Despite these benefits, choir singers reported lower autonomy levels compared to solo singers, suggesting a potential compromise between individual autonomy and the communal aspect inherent in choral singing. Employing Self-Determination Theory, the study revealed that choir singers had a strong intrinsic motivation and valued their own activity, although autonomy levels were low. Choir singers and team sports players showed higher levels of overall wellbeing, compared to solo singers, which underscores the positive impact of group activities. Choir singers reported a higher entitavity score, indicating a strong sense of social identity and cohesion within the choir community, compared to team sports players. The third study (Maltschweiger & Sattmann, 2016) included four different comparison groups: 3 choirs, 2 brass bands, 3 theatre involvement groups and 1 concert listening group. It focused on examining the effects of each group activity on participants' psychological, emotional and social wellbeing. They found that choir and theatre group members reported higher levels of positive affect and reduced stress after the activity, when compared to the brass band group. They also found that the more participants like and are familiar with the musical piece they are engaging with (playing, singing, listening to), the more they experience wellbeing. Choir singers reported reduced stress before and during the rehearsals, and their anxiety levels decreased after, compared to the concert listening group, whose anxiety levels increased during the activity. The study showed that choir participation, brass band and theatre group were perceived as positive activities, with choir singers frequently reporting improved wellbeing after rehearsals, supporting the previous research regarding positive effects from choral singing on overall health and wellbeing.

The systematic review shows that choral singing is a valuable activity that significantly contributes to various aspects of wellbeing for both adolescents and adults. Its unique combination of psychological, social, emotional, cognitive and physical benefits distinguishes it from other leisure activities. It underscores the importance of promoting choral singing as a beneficial practice for enhancing overall health and quality of life. The findings highlight the significance of choir engagement not only for individual growth but also as a means of fostering inclusion and social connections during the formative years. The scarcity of research dedicated to the wellbeing of adolescents in choirs shows a notable gap, emphasizing the need for more extensive investigations in this essential area.

SUMMARY OF OUTCOMES

Studies that include mainly adolescents (n = 4)

1. **Clift and Hancox (2001)**
   Study design: Mixed method
   Data collection:
   – 2 surveys conducted
   – 1. Qualitative (open ended questions)
   – 2. Quantitative (statements)

   Key findings:
   – *Psychological/emotional*
   Improves mood, induces emotions, reduces stress, more relaxed, good psychologically, happiness, good for soul, achievement
   – *Social*
   Meeting new people, making friends, socialize, good atmosphere
   – *Physical*
   Improved posture, increased control over breathing/improves breathing, more energized, lung function, heart exercise
   – *Spiritual*
   More positive about life, contributes to society, connected, therapeutic
   – *Main finding*
   Choral singing significantly enhances psychological/emotional and physical well-being, mental health and spiritual fulfilment, with variations in experiences depending on gender and age.

2. **Acquah (2016)**
   Study design: Mixed method
   Data collection:
   – 1. Questionnaire with students
   – 2. Interview with teachers

   Key findings
   – *Psychological/emotional*
   Reduced stress, relieving tension, positive emotions, self-confidence, dedication
   – *Social*
   Emotional support, fostering teamwork, building social identity, sharing
   – *Physical*
   Deep breathing, physically active – fitness, energized, improved posture

– *Cognitive*
Expression during the performance, musical skills – sight reading, vocal technique, focused attention, brain stimulation
– *Spiritual*
Therapeutic, uplifting, spiritual growth
– *Main finding*
Generative mechanisms that were recognized: focused attention, deep breathing, dedication, physical fitness, sharing and brain stimulation.

3. **Parker (2014)**
Study design: Qualitative
Data collection:
– Interviews
– 3 waves of data collection:
  – 45 minute interviews with 15 choir members
  – 13 students reviewed and gave feedback regarding the temporal matrix
  – and propositional statements

Key findings
– *Psychological*
Pride, acknowledgement and accomplishment, self-acceptance, at peace
– *Social*
Developing social identity, belonging to a group, part of a team, building friendships, social sup<port
– *Cognitive*
Better singer, better music reader, creating skills
– *Main finding*
The grounded theory of social identity development revealed an eight--stage process.

4. **Linnemann et al. (2017)**
Study design: Quantitative
Data collection:
– MDMQ (Multidimensional Mood Questionnaire)
– Subjective stress (scale 0-100)
– Subscale PAS (Percieved Available Support) from the BSSS (Berlin
– Social Support Scales)

Key findings
– *Psychological/emotional*
Enhanced mood, more relaxed over time, less stress, feeling of calmness
– *Social*
Increased social contacts and interaction

– *Main finding*

Choir singing improves psychological and emotional wellbeing, but increase in social contacts were not connected to the social wellbeing.

Studies that include mainly adults (n = 8)

1. **Lonsdale and Day (2020)**

Study design: Quantitative (comparison groups)

Data collection:

- ExWB (Hedonic wellbeing)
- NSa-WS (Need Satisfaction at Work Scale)
- MHC-SF (Mental Health Continuum Short Form)
- OHQ-SF (Oxford Happiness Questionnaire)
- SWLS (Satisfaction With Life Scale)
- PHQ-4 (Patient Health Questionnaire)
- RSES (The Rosenberg Self-Esteem Scale)
- TIPI (Ten-Item Personality Inventory)
- CSES (The Collective Self-Esteem Scale)

Key findings

- *Psychological/emotional*

Enhanced mood, reduced stress, happiness, self-esteem

- *Social*

Social connectedness, sense of belonging, mutual goals, interpersonal contacts

- *Outcome differences between groups (choir singers, solo musicians, orchestra/band members and athletes)*
  - No differences in psychological wellbeing between groups.
  - Higher level of connectedness in group activities compared to individual activities.
  - Lower levels of autonomy in group activities, compared to individual activities.
- *Main finding*

Choral singing offers similar psychological benefits as other comparison groups, with differences in autonomy and relatedness, supporting the relevance of Self-Determination Theory in understanding these effects.

2. **Clift et al. (2010)**
Study design: Mixed method
Data collection:
– BEES (Brief Emotional Experiences Scale)
– WHOQOL-BREF (World Health Organization Quality of Life Brief Version)

Key findings
– *Psychological/emotional*
Less anxiety and stress, sense of achievement, improved mood
– *Social*
Social support, part of a team, social inclusion, sense of community
– *Physical*
Controlled breathing, physical fitness, relaxation, more active
– *Cognitive*
Brain stimulation, education, focused attention
– *Main finding*
Choral singing is perceived as beneficial to well-being, especially among women (reporting more benefits than men), even for those facing significant mental health challenges experience positive effects.

3. **Good and Russo (2021)**
Study design: Quantitative
Data collection:
– PANAS (Positive and Negative Affect Schedule)
– saliva samples

Key findings
– *Psychological/emotional*
Improved mood, increased oxytocin levels, reduces stress
– *Social*
Social bonding, social support
– *Main finding*
Increased mood effect of group singing is primarily caused by social factors followed by an increase in oxytocin levels, unlike solo singing, which does not have the same effect on well-being.

4. **Jozić and Butković (2023)**
Study design: Quantitative
Data collection:
– PANAS (Positive and Negative Affect Schedule)
– SWLS (Satisfaction With Life Scale)

Key findings
– *Psychological*
Life satisfaction, SWB

– *Emotional*
Lower negative affect when singing with others
– *Main finding*
Group singing is associated with reduced negative affect and higher life satisfaction, especially for individuals who consider singing important, suggesting that group singing may be more beneficial for well-being than solo singing.

5. **Stewart and Londsdale (2016)**
Study design: Quantitative (comparison groups)
Data collection:
– ExWB (Hedonic wellbeing)
– SVS (Subjective Vitality Scale)
– WEMWBS (Warwick-Edinburgh Mental Wellbeing Scale)
– SRQ-E (Self-Regulation Scale)
– NSa-WS (Need Satisfaction at Work Scale)
– SWLS (Satisfaction With Life Scale)

Key findings
– *Psychological/emotional*
Oxytocin release, improved mood, positive affect
– *Social*
Connection, shared goals, social bonding, sense of togetherness
– *Outcome differences between groups (choir singers, solo singers and team sports players)*
  – In terms of Self-Determination Theory, choral singers value their activity and feel internally motivated, even if they have less independence than solo singers.
  – Significantly higher levels of overall well-being reported in group based activities than in solo singers.
  – Choir singers group reported higher entitativity scores than team sports players.
– *Main finding*
Participating in group activities (choral singing and team sports) is associated with higher psychological well-being, in comparison to solo singing. Belonging to a group is key factor in the well-being experienced by choral singers.

6. **Livesey et al. (2012)**
Study design: Mixed method
Data collection:
– WHOQOL-BREF (World Health Organization Quality of Life Brief Version)

Key findings

– *Psychological/emotional*

Mood regulation, reduced negative affect, energizing, calming, catharsis, self confidence

– *Social*

Social inclusion, making friends, sense of belonging

– *Physical*

Respiratory and vocal health, breathing, hormonal changes, heart health, mobility, immunity

– *Cognitive*

Concentration, memory, sense of balance in life, distraction and challenge, brain active, knowledge, skills and competence

– *Main finding*

Choral singing is showed significant benefits for mental and physical health and overall well-being, through social connections and a sense of meaning of life. These benefits are consistent across different nationalities, ages, genders and well-being statuses.

7. **Maltschweiger and Sattmann (2016)**

Study design: Mixed method (comparison groups)

Data collection:

– PANAS (Positive and Negative Affect Schedule)
– PSQ (Perceived Stress Questionnaire)
– STAI (State-Trait Anxiety Inventory)
– Group interviews (2-8 people) after the activity

Key findings

– *Psychological/emotional*

Satisfaction with rehearsal linked to positive affect, distraction from daily life, relaxation, less stressed

– *Social*

Social bonding, sense of a community, connectedness

– *Outcome differences between groups*

Brass band benefited the least from the rehearsal, whereas the choir and theatre group benefited the most.

Perceived stress decreased more in the choir than the brass band group.

Satisfaction with the rehearsal was the highest in the choral singers.

– *Main finding*

Choral singers and theatre group showed greater psychological benefits and reduced stress compared to brass band and concert listening groups.

8. Fernández-Herranz et al. (2021)
Study design: Quantitative
Data collection:
- CAPBES (Choral Activity Perceived Benefits Scale)
- Factor analysis:
- EFA (Exploratory factor analysis)
- CFA (Confirmatory factor analysis)
- ESEM (Exploratory structural equation modelling)

Key findings
- *Psychological/emotional*

Overall satisfaction, enjoyment, increased sense of optimism, self-realization
Cognitive
Improved abilities, sense of achievement, personal growth
- *Social*

Group engagement, social support, sense of belonging to a group, mutual social goals
- *Main finding*

Study provided an instrument that allows us to define the structure of the benefits of choral singing. Dimensions that emerged: *satisfaction, ability, group engagement, belonging, optimism*

* For the studies that include comparison groups, the wellbeing benefits in this summary of outcomes are listed only for choir singing group.

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Povzetek
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Čeprav so številne raziskave raziskovale prednosti zborovskega petja v primerjavi z drugimi glasbenimi in neglasbenimi dejavnostmi ter njegove pozitivne učinke na dobro počutje in duševno zdravje odraslih, je malo raziskav, ki preučujejo, kako sodelovanje v zboru izboljšuje dobro počutje mladostnikov. Cilji pričujoče raziskave so preučiti večplastne prispevke zborovskega petja k psihološkemu, socialnemu, čustvenemu, h kognitivnemu in k fizičnemu dobremu počutju mladostnikov ter odraslih in identificirati prednosti sodelovanja v zboru v primerjavi z drugimi prostočasnimi dejavnostmi, tako skupinskimi kot individualnimi. Začetno iskanje v spletnih bazah podatkov (Elsevier, ERIC, MEDLINE) in drugih spletnih virih (ResearchGate, Academia.edu, SageJournals, Frontiers, PubMed) je prineslo 1.377 člankov. Po pregledu 64 celotnih besedil je 12 raziskav izpolnilo merila za vključitev, vključno z mešanimi metodami (n 5), s kvalitativnimi (n = 1) in kvantitativnimi (n = 6) pristopi. Večina raziskav, vključenih v sistematični pregled, je zajemala širok starostni razpon, kar kaže na heterogene vzorčne skupine, ki so bile razvrščene v pretežno mladostnike (n = 4) in pretežno odrasle (n = 8). Psihološko dobro počutje je bila prevladujoča dimenzija dobrega počutja v pregledanih raziskavah, vključno z izboljšano kakovostjo življenja, življenjskim zadovoljstvom in motivacijo. Družbeno dobro počutje je bilo prav tako primarni fokus raziskav, ki poudarja pozitivne vplive na identiteto, socialno povezanost in vključenost. Čustveno dobro počutje je dosledno kazalo pozitivne učinke, vključno z izboljšanim razpoloženjem in zmanjšanjem stresa. Kognitivne koristi, kot so povečana osredotočenost in izboljšane glasbene veščine, so bile očitne v obeh starostnih skupinah. Fizično dobro počutje je vključevalo izboljšano zdravje glasu, večjo telesno pripravljenost in nadzorovano dihanje. Raziskave primerjalnih skupin poudarjajo edinstvene prednosti zborovskega petja v primerjavi s solo petjem, z ekipnimi športi in drugimi glasbenimi dejavnostmi, zlasti v smislu socialnih in psiholoških koristi. Sistematični pregled poudarja dosledno pozitivne učinke zborovskega petja na splošno dobro počutje v obeh starostnih skupinah. Ugotovljeno pomanjkanje raziskav, ki se osredotočajo na mladostnike in njihovo dobro počutje ob zborovskem petju, poudarja potrebo po prihodnjih raziskavah na tem področju. Celostnejši pristop v teh raziskavah lahko ponudi celovito razumevanje večplastnih koristi za mladostnike. Poleg tega bi vključitev več longitudinalnih raziskav lahko pomagala raziskati dolgoročne učinke sodelovanja v zboru na dobro počutje mladih ter prispevala dragocene vpoglede tako za raziskovalce kot za praktike.