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# **Health Education for Musicians in the UK: A qualitative evaluation**

## **Abstract**

**Background:** Musical training in higher education music institutions (e.g. conservatoires) has been associated with health-related issues among musicians. The Health Promotion in Schools of Music project in the USA and the Healthy Conservatoires project in the UK have therefore recommended health promotion at conservatoires. Few health education courses have been evaluated to date, however. A five-month health education programme for first-year undergraduate students at a British conservatoire was introduced as part of the core curriculum in September 2016. The programme, which involved both lectures and seminars, was evaluated using quantitative and qualitative approaches. This article reports only the qualitative evaluation.

**Methods:** Twenty semi-structured individual interviews were conducted either face-to-face or via Skype in April 2017. The data were transcribed verbatim and analysed thematically.

**Results:** Five themes were identified: 1) the programme as a catalyst for engagement with health; 2) behavioural changes; 3) barriers to engaging with the programme material and initiating changes; 4) suggestions for improvement; and 5) misinformation. Generally, participants viewed the programme as relevant and informative, particularly appreciating the intimate nature of the seminars. They reported that the programme helped them take a broader perspective on musicianship and that they would welcome sessions that are more practical than theoretical. They also reported instances of change in their behaviours relating to both lifestyle and management of music practice.

**Conclusion:** Undergraduate music students viewed this health education programme positively. Their feedback illustrates the complex nature of health promotion in the conservatoire setting.

## **Keywords**

health promotion; music students; programme evaluation; behaviour change

## **Lay summary**

Professional classical musicians struggle with a range of occupational health issues. It has therefore been recommended that health education be integrated as part of their higher education training. Although some programmes of this nature have been implemented in recent years, very few were evaluated, so it is often unclear if they work and if so, how. This paper reports the evaluation of one such programme that lasted five months and was delivered to first-year undergraduate music students in the UK. Although the evaluation of the programme was complex and involved many measurements, this article reports only the analysis of themes arising from interviews with 20 participants that were audio-recorded and transcribed verbatim. The results of the analysis show that participants viewed the course positively. Specifically, they viewed the programme as relevant and informative, and appreciated the intimate nature of the seminars. The programme seemed to widen their perspective on musicianship and they reported changes in their behaviours related to

preventative health and music practice, although they also expressed a preference for an even more practical and thus less theoretical approach.

## 1 Introduction

Classical musicians experience a range of well-documented health problems, which include music performance anxiety (MPA), performance-related musculoskeletal disorders (PRMDs), and hearing loss (for literature reviews, see Couth et al., 2021; Matei and Ginsborg, 2017; Matei et al., 2018; Rotter et al., 2020; Zhao et al., 2010). It has been clear for some time that health education is needed in conservatoires. In the US, the Health Promotion in Schools of Music (HPSM) project recommended offering an undergraduate occupational health course to all music majors, educating them about hearing loss, and encouraging their active engagement with health care resources (Chesky et al., 2006). Meanwhile, in the UK, the Healthy Conservatoires initiative brings together conservatoire representatives nationally to discuss best practices (Healthy Conservatoires, n.d.). However, few health courses for conservatoire students have been designed with sufficient care, in our view; they have not been documented adequately, nor have they been evaluated thoroughly (e.g. Arnasson et al., 2018; Baadjou et al., 2018; Barton and Feinberg, 2008; Clark and Williamon, 2011; Laursen and Chesky, 2014; Lopez and Martinez, 2013; Su et al., 2012; Zander et al., 2010). None were based on comprehensive literature reviews and the only report of a course based in the UK (Clark and Williamon, 2011) focused on the evaluation of a mental skills programme rather than health education more broadly. Furthermore, only two assessed outcomes related to health education/literacy (i.e. awareness, perceived competency, perceived responsibility, knowledge) (Barton and Feinberg, 2008; Laursen and Chesky, 2014) and in all instances where behaviour change was measured, unvalidated tools were used. None of the reports listed above included qualitative findings from interviews as part of the course evaluations.

The present article reports a study that was conducted as part of the Musical Impact project, a longitudinal study investigating the health of musicians in the UK. The present study aimed to evaluate a five-month health education programme, Health and Wellbeing for Musicians (Matei et al., 2018), delivered as a compulsory component of the Artist Development 1 course taken by first-year undergraduate students of Western classical music at a music conservatoire in the UK.

As reported by Matei et al. (2018), the programme itself was developed on the basis of i) reviews of the research literature describing and evaluating interventions designed to prevent and mitigate MPA and PRMDs, to raise awareness of the potential for musicians to experience noise-induced hearing loss, and other health education programmes for music students; ii) the HPSM recommendations (Chesky et al., 2006); and iii) discussions with the conservatoire's head of the undergraduate programme. The programme took place between September 2016 and February 2017 and consisted of seven one-hour weekly lectures delivered to the whole cohort (104 students) and five associated seminars offered to ten groups of 10–15 students. The content related, broadly, to health and wellbeing. Its main aim was to raise awareness of musicians' physical and mental health, based on the latest evidence, but also effective strategies for practising, memorizing and rehearsing, and life skills and behaviour-change tools inspired by health psychology.

The topics covered included practice strategies and time management, MPA, PRMDs, hearing loss, lifestyle (physical activity, sleep, nutrition, and stress management), behaviour-change techniques and information on thinking errors and cognitive tools. The first author, who has a background in health psychology, facilitated the seminars on life skills. The second, a music

psychologist, delivered the seminars on MPA and memorization, and a specialist in performing arts medicine facilitated all the seminars on ergonomics and posture. The remaining seminars were facilitated by a range of tutors who were musicians teaching in the same institution.

The programme was also based on the Capability-Opportunity-Motivation Behaviour (COM-B) model of behaviour change. This explains all behaviours in terms of the interaction between three factors – capability (physical and psychological), opportunity (physical and social), and motivation (automatic and reflective) (Michie et al., 2011). It was used in the programme as a teaching tool to convey the complexity of relevant behaviours. For example, in relation to physical activity, capability was addressed by providing students with information about preventative lifestyles and pointing out that physical activity is not just about going to the gym. Opportunity was addressed by highlighting the importance of the physical and social environment and suggesting the use of everyday cues such as taking the stairs and walking to various destinations, or engaging in physical activity with a group of friends. Motivation was addressed by recommending students to choose activities they really enjoy. The COM-B model was applied to all relevant behaviours; for example, in relation to practising, students were advised to take breaks whenever possible and to identify opportunities to perform for their peers.

The quantitative evaluation of the Health and Wellbeing programme is reported in Matei et al. (2018). Within-subject data were gathered at the beginning and end of the intervention in September 2016 and February 2017, while control data were gathered for between-group analysis in March–April 2018 only. Tinnitus and hyperacusis were reported by both groups of respondents, with a higher incidence in the control group (third-year students) than in the intervention group (first-year students). Ten percent of the intervention group had been diagnosed with hearing loss.

Perceived knowledge of topics covered on the course, and awareness of the risks to health associated with performing music, increased, as did self-efficacy. Average reported ratings of perceived exertion (RPE) decreased significantly from baseline to post-intervention, and were higher for controls. Controls also experienced more severe depression, distress and lack of vitality, higher perceived stress, lower positive and higher negative affect. Otherwise, there were significant decreases on measures of health-related quality of life, such that sleep problems, distress and lack of vitality all increased significantly from baseline to post-intervention. Positive affect also decreased significantly from baseline to post-intervention. These negative findings may be due to the accumulation of pressure over time. At the time of the post-intervention data collection, the intervention group was already facing deadlines for submitting written work and giving assessed performances.

The qualitative evaluation reported here aimed to assess the participants' feedback on the overall impact of the programme; its perceived benefits and limitations; changes in participants' views and behaviours; and suggestions for improvements to the programme.

## 2 Materials and Methods

### 2.1 Design

The study used a qualitative approach and a cross-sectional design.

## **2.2 Participants**

As shown in Table 1, 20 first-year undergraduate students out of 81 who completed their post-intervention questionnaires took part in the research. They were 12 women and 8 men from the Schools of Wind, Brass and Percussion; Strings; Keyboard Studies; Vocal Studies; and Composition.

[insert - Table 1. Participants' characteristics - here]

## **2.3 Procedure**

Ethical approval was granted by the Conservatoires UK research ethics committee. Twenty participants were interviewed one-to-one, in private rooms at the conservatoire and via Skype in April 2017. They volunteered after being told they would be rewarded with £10 each.

The semi-structured interviews sought to explore how well the objectives of the programme had been met and its impact on participants' life generally. The schedule was based on that used by Clark and Williamon (2011), but the order of the questions was tailored to each participant's responses. It included items requesting feedback on the programme generally; if and/or the extent to which it changed their existing views; tools they learned about; to what extent and how they attempted to implement them in their routines; the extent to which they thought such a programme was appropriate in the conservatoire setting; the most and the least useful topics, and those they wished had been approached differently; suggestions for improvement (see Supplementary Material S1). Each interview was recorded using a portable recorder and the data were transcribed verbatim.

## **2.4 Analysis**

Transcripts were analysed thematically according to Braun and Clarke (2006)'s six-step approach. The analysis was based on an inductively driven, semantic approach. The analysis was conducted by the first author and discussed with the second author. While quotations attributed to participants using their ID codes are used to illustrate themes, an exhaustive list of quotations for each theme is included in Supplementary Material S2, for the sake of completeness.

## **3 Results**

Five themes relevant to the aims of the study were identified and are presented below: 1) the programme as a catalyst for engagement with health; 2) behavioural changes; 3) barriers to engaging with the programme material and to initiating changes; 4) suggestions for improvement; and 5) misinformation. All participants responded in the affirmative when asked if a conservatoire is an appropriate setting for a health education programme.

### Theme 1. The programme as a catalyst for engagement with health

*Seminars.* This was the sub-theme identified most frequently. Most participants perceived seminars as particularly effective for several reasons. They were more enjoyable than the lectures, and engaging, which might have made them more memorable:

I quite looked forward to the seminars (P4)

[We] discussed it and then you actually learn and for us it was more like fun . . . like a game (P2)

[It] didn't feel like being forced to study something . . . I don't know . . . it just made the whole thing a lot more interesting and easy to remember. (P4)

Furthermore, seminars stimulated more focused discussions and provided a better context for asking questions:

The seminars forced you to engage and forced you to talk with others and sometimes you're asked questions which can be like 'Ah, that means you're actually thinking about it' and like form your own opinion (P3)

I feel like it's a bit more personal and get to ask the questions you need to ask. (P6)

Seminars allowed students to hear from their peers, which often increased awareness of their struggles, relief that they shared worries, and more connection to them through discussions around sensitive topics:

[It] was kind of reassuring to know that I wasn't the only one that had had struggled previously. (P7)

*Relevance.* Many participants perceived the programme content as relevant to their own personal needs as individuals; as first year undergraduate students; as young musicians; and in response to what they identified as being their peers' needs or lack of engagement in desirable behaviours:

[Some] of my friends would continue practising even though they were maybe feeling a bit of pain or tension, so I think it was really good for us to actually learn about how we can prevent injury and that if we start feeling pain that we actually have to stop now, so it's good to like learn about this at the stage we're at now so that we can kind of prevent things developing, getting worse. (P17)

The relevance of the programme was linked to its being the only source of health-related information in the curriculum:

[Otherwise] I don't know how we would get this information (P17)

and thought to have been of benefit:

[Before] getting to uni as well as at uni. (P1)

*Raising awareness.* The programme presented novel information:

[That] I hadn't even thought about before (P14)

I wouldn't have thought of that myself. (P9)

Moreover, it raised awareness of musicianship as a broader concept, going beyond music making and incorporating health and wellbeing and their implications into students' lives more widely:

[It] did make me sort of realise more . . . like . . . compared to before college, like I view being a musician or a singer more like a . . . kind of comparing it to an athlete, so we have to be well and versed in all things . . . like . . . the whole package. (P6)

Other changes of attitude referred to causes of injuries; physical activity; and mental practice.

*Motivation.* One participant felt encouraged to challenge herself:

[But] it was ever evident from the AD [Artist Development] course that they did encourage us to take up more opportunities, to sort of put ourselves out of our comfort zone in order to make progress. And I think that's been effective. (P7)

Another was inspired to spread the information further:

I thought the idea of the course was something very nice that I could bring back home, to [name of the participant's country], to teach more people about it. (P18)

The programme inspired specific changes of attitude, but also the idea of exploring non-musical activities that might potentially be of interest.

*Impact in the wider context.* Participants reported incorporating the information they had acquired into their studies more broadly:

[It] has been fully transferable into my wider college experience (P4)

[A] lot of what was talked about in the lectures or the seminars I've taken into my lessons. (P4)

Some of the information was in line with one teacher's attempt to address their student's performance anxiety:

[It] worked quite well, actually . . . at the same time my teacher was also purposefully putting me into stressful situations in my lessons so I could recreate a real performance. (P1)

Also, it fitted well with recommendations received from a health professional:

[Just] before we went into these lectures, my doctor actually recommended that I started exercising a lot cause I had trouble with posture and things like that and . . . So, it's quite interesting to look at the results . . . 'cause I remember in some of the lectures there were discussions about cardiovascular fitness and basic strength training and... so, that's something I've taken on board in the last couple of months and I've seen some really positive results. (P15)

*Empowerment.* The programme gave some participants a better sense of control over their own health and wellbeing:

I feel I can have a lot more . (P17)

*Other effective characteristics of the programme:* The programme presented tools that could be implemented easily and immediately; it was comprehensive and diverse:

I like the Pomodoro technique in the sense that it's just . . . it's immediately applicable (P15)

[You] gave techniques that were quite specific, but you gave a variety that could be worked in different situations whether it's short term and immediate or long-term, progressive techniques . . . (P15)

[Cause] you basically covered everything from nutrition to general mindset towards things, so I think it was well covered topic-wise. (P19)

Given that most students aspire to be professional musicians and invest their instrumental teachers with a lot of authority, several participants appreciated the fact that the lecturers were musicians themselves and/or had had first-hand experience of the issues they were talking about:

[She] is a singer herself which obviously connected to me. (P8)

One participant reported reassurance and relief after having received advice from an authority-invested figure.

## Theme 2. Behavioural changes

Participants reported a variety of behavioural changes to their lifestyle, time management and/or planning of and strategies for practice. These changes included initiating certain actions and/or increasing the frequency and intensity of already existing actions. Participants also referred to the perceived benefits of having implemented such changes.

*Health-related behavioural changes.* Several participants mentioned having increased their physical (in most cases aerobic) activity levels after the relevant seminars and lectures:

[So] I found the run very good for myself and I do quite a lot of running these days and I started doing after the lecture . . . it's kind of giving you the inspiration to do that. (P5)

Some managed to integrate brisk walking as part of their routines:

[When] I walk to college, for example, one way I'm going brisk walking, and for example coming back to home, no. (P12)

The benefits of having initiated these changes that were mentioned included higher levels of energy, less tension and better playing:

I think it helped me not to be so much sleepy . . . I was always tired . . . but when I run, I think that I would be tired now, but I am much more fresh after running (P12)

I think it has helped with my playing as well . . . I feel a lot more relaxed and it's good for kind of tension release as well. (P17)

One participant made time for relaxation, while another changed the environment in order to concentrate better:

[For] me that sort of helped to, you know, put in my diary a couple of hours here and there which I say to other people it's busy . . . it's actually just my own time where I can relax by myself . . . and I found that's been very useful . . . (P16)



[Now], like every day I ensure I go somewhere other than college or halls . . . whether that be . . . I go work in a coffee shop up on Oxford Road, where it's quiet . . . but it's just a different environment . . . and I find personally completely refocuses me... cause I get to a point where I'm being completely unproductive and I'm . . . let's take half an hour and walk somewhere or do something else. (P4)

Two participants reported having adjusted their approach towards hearing protection:

[So] now if there's like really loud music, I put my ear plugs in (laughs) which I would have never done before (P6)

I cannot go clubbing without wearing ear plugs so I get really worried and paranoid. (P2)

*Practice-related behavioural changes.* These included starting a daily warming-up strategy:

[In] order to minimize tension . . . 'cause I did have quite a lot there, so . . . they've really helped. (P10)

Participants referred to the use of imagery in visualising themselves perform, which

made me think that when I'm performing I used to have like physical symptoms like performance anxiety that I feel a lot more calm inside because I've kind of pictured what's going to be like. (P17)

They reported planning practice, undertaking mental practice, and breaking down practice time that had been associated with increased productivity:

[Before] going to practise now, I often make notes of what I'm going to do and stuff just because it's so much more concise and like how... it was really useful (P3)

[As] I got used to it, then I found that I could adapt quicker and then when I actually got to holding and playing the violin then I could put the skills I've been thinking about into practice a lot easier . . . because I had actually thought about it before . . . (P16)

[It's] much better to do two intervals in that hour instead of just one long one . . . so I started using that in my daily routine . . . I'm making more progress more rapidly .(P19)

Focus and enjoyment increased, as did taking breaks which was associated with more effectiveness when practising:

[It's] just less mindless, I think I'm getting more done and that makes it more enjoyable, so making more progress . . . (P14)

[Taking] time out so that I feel more relaxed with myself that I can have more effective practice sessions. (P16)

Setting specific goals and having a plan

made my practice like much more efficient and much more effective, so I'm able to feel like I'm making more progress than I was before, I think. (P7)

### *Theme 3. Barriers to engaging with the programme material and to initiating changes*

Several barriers may have reduced students' engagement with the programme material and the likelihood of their initiating changes.

*Lack of specificity.* Some participants perceived certain sessions as being too broad and vague:

[Name of session removed] was helpful, but it was quite like broad . . . it was quite general. (P7)

Some participants felt left out when the material was not being directly specific to their own instrument or instrumental group:

[It] was very aimed at singers and I felt like the lecturer was talking directly to the singers and like the instrumentalists were like a side thought. (P1)

*Not enough focus on solutions.* Some participants thought that the programme was too descriptive and not prescriptive enough. They felt that too much time was spent on defining issues which they were already familiar with and not enough on practical coping strategies:

I didn't have this much anxiety but then after all those lecturers, after you perform, you sort of think about it, so there was not like . . . there hasn't been a proper way of dealing about it. (P11)

*Redundant/repetitive material.* Some participants found that there was sometimes too much overlap between lectures and seminars and perceived this as a waste of their time:

[But] when you're in a lecture for an hour learning about a topic that again could be condensed down and then later on in the same day you go to a seminar that then covers the exact same thing, you feel like you're losing two hours (P1)

*Discussing mental health in groups.* Some singers mentioned that discussing "the mental side of health" (P7) or performance anxiety made some students "feel less comfortable discussing . . . no one wants to volunteer the stuff that they struggle with and have the whole group sort of analyse it" (P7). As a result, someone suggested that this topic "should be optional for them" (P8).

*Lecturers' attitudes.* One lecturer was perceived as having created "quite a tense atmosphere" (P17) and had a "patronizing" attitude. (P1).

*Lack of perceived access to health services provided in college.* Some participants mentioned they were not aware of where to go when they needed health-related help. Although they were aware that support was available, they found it problematic to access it:

['Who] on earth do I go and speak to?' . . . sometimes there's just an unawareness of who's who because in our first year there's so many people to get to know and we're seeing different people weekly . . . new faces all the time . . . (P4)

[We've] been told that support is there . . . but that's no use if we've got no idea how to access it. (P2)

*Environmental and social barriers.* In terms of social barriers, one participant mentioned feeling isolated as a foreign student and not being able to go for a walk with friends, as well as financial barriers. Other barriers included lack of time and energy:

[The] problem is that in (city name removed) it's really hard to do this because I don't really know people in here . . . so I just have to stay on my laptop and talk to my friends from home . . . going to a bar or something with my friends . . . I can't do this here, because of the prices (P18)

[But] I'm always so tired by the end of the day that I don't wanna look into it (P1)

[We're] so busy here and we have so many rehearsals and then they're telling us 'get out, listen, exercise, go do stuff, non-musical related' and you got all this information, but *when* on earth am I gonna do this and get the recommended sleep that you're telling me to get, and do this kind of stuff .(P3)

Environmental barriers included living too close to college, which might prompt even more work and practice:

[Because] the halls are basically on the college, you can maybe walk from college to halls and then you're gonna carry on doing practice or work. (P4)

*Sensitisation.* Some participants felt that merely talking about anxiety and pain might have caused or intensified their own experiences of them. Some participants also perceived that the programme placed too much emphasis on the negative side of physical injuries and anxiety:

[Instead] of focusing on 'oh, this might happen to you, this might happen to you', sort of maybe it would be better to remind us of the joy of performing and going about it in a different way. (P11)

One participant would have liked a more normalised approach to pain:

I think we were taught to be really aware and careful with playing in case we inflict injury upon ourselves, but then also I think we should be warned that you can't avoid everything 'cause that's what I was trying to do . . . like prevent all possible situations which obviously isn't possible . . . it was like a little bit of putting fear into me about how injuries could happen, but in reality it's probably inevitable that we're going to be injured at one point . . . it's how you treat it afterwards and go forward. (P1)

#### Theme 4. Suggestions for improvement

*More information on certain topics.* Participants expressed their interest in being offered more information on a variety of relevant topics, including effective practising strategies; mental health; general health and even healthy affordable eating; relaxation strategies; injury management; and exam preparation.

[That] session on how to practise and what makes effective practice and valuable practice . . . something like that would have been quite useful . . . maybe for the second term to sort of top up (P16)

[There] could be a deeper focus on mental health . . . and generally looking after yourself mentally . . . not necessarily to do with music but generally . . . (P4)

[Maybe] getting even like a sports and nutrition person to come in . . . and going 'OK guys, you're students here, this is what you can eat that's really cheap. (P2)

*More intimate sessions.* Some participants expressed their need for sessions allowing for more intimate and honest discussions. Struggling, for example, could be de-stigmatised:

[Being] told that it's actually ok to struggle, because I think we all kind of have this impression that 'Oh, you know, everyone else seems ok, like I have to keep going, it must have been so useful in knowing when someone goes 'Oh, I'm really struggling to practise . . . and everyone is like 'But you're so good' and I'm really struggling . . . it would be a chance for us to understand and know that we're not alone and that we're not . . . like if

you're struggling with an excerpt, it's not just you . . . all of them are struggling as well . . . (P2)

Support from peers within students' own departments was also endorsed as compensation for lack of support from students' main teachers:

You wouldn't necessarily have to have a teacher . . . I think a lot of them obviously, you've got postgrads who are very experienced . . . fourth years are very experienced . . . they can come and lead . . . maybe something like a seminar to help them help us cause it's all very well like your teacher would tell you something, but if coming from experience, if your own teacher kind of goes wrong at times . . . and you don't agree on everything, I've come out of my lessons . . . I had worked so hard on . . . and ripped apart in my lesson and I got really down and actually from what I've been talking to him at the Opera (her friend) and he's been going 'It's fine' and helped me cope and gave me advice and that for me has been so key. (P2)

*More applied sessions.* One participant suggested incorporating some of the information presented in sessions as part of coaching or applied sessions in which the student is performing and then supported via discussions and questions with regards to not only her technique and musical interpretation, but also her emotions and thoughts, as well as coping strategies one could make use of if needed:

[Maybe] a coach of some kind, one of you maybe, one of the Artist Development team lecturers to sort of guide them through these processes and sort of put this things into practice but in a very comfortable environment . . . not motivate them, but to give them the tools to guide them the way through the mental process . . . 'cause . . . think sometimes you need to have a mental foundation yourself and find as much comfort as you can as a performer in yourself to be as confident as you can . . . I personally think that would be a very beneficial thing for me. (P15)

A few participants suggested more guidance on how to structure their day and also on pre-performance routines:

[Because] if you have a free day you just think 'Oh, I'm just going to do three hours of practice' and the rest of the time you don't know (P11)

[What] you should do on the day of the concert . . . I think that's not talked about a lot...before competitions or concerts (P11)

More emphasis on specific exercises for students playing different instruments was also suggested, as well as a performance class for those suffering from performance anxiety.

*Sources of information.* Some participants said they would have liked a web link with relevant sources of information, references and practical tips, provided via Moodle [the internal learning management system]:

[Maybe] like a page on there . . . which has tips . . . could be just like health and wellbeing tips, something like that, to look at . . . and the references. (P2)

*Sessions from role models.* Some participants suggested sessions from authority-invested figures who were prepared to discuss the issues and challenges they had experienced themselves:

[Probably] the idea of getting more professors who are performers themselves . . . having them to do more like lectures (P11)

### Theme 5. Misinformation

Three instances of potentially misinformed claims were found. Two of them referred to weight lifting or other exercises not being appropriate for singers:

I remember how they told us about the weight lifting and how it can affect our larynx and that it can just tighten it, so, weight lifts are really not good (P5)

[So] singers can't do specific exercises, but we're kind of . . . I think we generally know and they have been brought up the ones that we shouldn't do in our physical awareness classes. (P9)

Additionally, one participant oversimplified the meaning of the term "posture", referring to it as right or wrong:

I just sometimes forget about it just from day to day . . . I don't think about . . . you know . . . is this posture good for me, is this posture bad for me, whereas if we do have like a reminder, then it keeps it in the forefront of our consciousness so that if I'm just sitting down and work at my computer, if I'm practising, I just like remember . . . oh, I should be sitting like this, I should be standing like this, you know . . . positioning myself so that it's good for my spine. (P7)

## 4 Discussion

Five themes were identified from the analysis of the 20 transcripts: 1) the programme as a catalyst for engagement with health; 2) behavioural changes; 3) barriers to engaging with the programme material and to initiating changes; 4) suggestions for improvement; and 5) misinformation. Furthermore, based on a simple frequency calculation, all participants agreed that the conservatoire is an appropriate setting for health education.

According to the data contributing to Theme 1, participants found seminars enjoyable, engaging and personal, as they raised awareness of their peers' struggles, and enabled open dialogues on potentially sensitive topics to take place. Raising awareness of health-related issues is one of the main aims of health education (Matei et al., 2018), so it is important for the programme to have achieved this as a minimum. Participants found the programme content relevant, needed, and novel. Some were led to change their views on topics such as injury and mental practice. They reported feeling empowered to integrate the knowledge they had gained into their learning more widely, for example by relating it to advice from their instrumental or vocal teachers, or indeed health professionals. Feelings of empowerment could be related to increases from baseline to post-intervention in the quantitative evaluation, in outcomes such as self-efficacy; awareness of performance factors related to musculoskeletal injuries associated with learning and playing an instrument/singing; perceived knowledge of all topics covered in the course; and knowledge of sound intensity levels associated with hearing loss and how to deal with the health and safety issues associated with learning and playing a musical instrument. This also illustrates the way health promotion can happen in a 'healthy setting', as described by the World Health Organisation (WHO, 2018): a range of people with defined roles representing multiple levels of the same setting. One component of the programme that participants particularly enjoyed was the opportunity to hear from musicians and music teachers about their own personal experiences

of using strategies that students could put into practice easily and immediately. Of course, the fact that this content was delivered by musicians could have played a role in its acceptance by the students. If students are to engage with the topic and make changes in their behaviours as a consequence, it is important that they enjoy the seminars in which they learn about it, as positive affect can be argued to facilitate adherence to desirable health behaviours. Findings from this theme are supported by the quantitative analysis which showed significant pre-post increases in perceived knowledge of all topics in the course; and awareness of performance factors related to PRMDs (Matei et al., 2018).

The data contributing to Theme 2 included participants' reports of initiating behavioural changes in relation both to health and daily instrumental or vocal practice. For example, "when I walk to college, for example, one way I'm going brisk walking, and for example coming back to home, no" (P12) is an instance of environmental restructuring, a technique or intervention function in the COM-B model that is linked to physical opportunity. If the programme motivated students to implement changes, the perceived benefits of these changes such as reduced tension and greater productivity could have encouraged them to continue making and maintaining these changes over time. Participants reported increased use of hearing protection. This is particularly relevant given the finding from the analysis of quantitative data that first-year students were already experiencing tinnitus and hyperacusis, as were third-year students to an even greater extent (Matei et al., 2018). It is also worth noting that the behavioural changes reported by participants in the present study were not – and indeed could not have been – captured by the analysis of scores on the Health Promoting Lifestyle Profile II (Matei et al., 2018).

The perceived barriers described in Theme 3 included lack of specificity in whole-cohort lectures; lack of applied sessions; and content that was too repetitive at times. Three or four singers felt uncomfortable talking about personal issues such as performance anxiety and/or mental health and two participants said they were not aware of how to seek help from health services in college. Some students also mentioned that there was at times too much focus on negative aspects and that pain, for example, might need to be normalised. Other barriers labelled as social and environmental included being a foreigner far away from friends, thereby not having someone to go for a walk with; financial issues linked to going out, mentioned by one of the participants from a country poorer than the UK; lack of time and being too tired; and living in such close proximity to the college that walking was unlikely to be incorporated into students' daily routines. Barriers to healthy lifestyle behaviour are not just environmental and social, as predicted by the COM-B model, but also arise from social determinants of health (WHO, n.d) that are often beyond the individual's control. All these factors must be taken into account if lifestyle behaviour is to be addressed successfully.

While seminars were run for small groups of students who played the same instrument or were singers, lecture topics were kept broad so that basic information applicable across instruments and the voice could be given. Certain topics might have received more attention in sessions because of the lecturer's background or interests, regardless of their audience. Alternatively, some participants showed a strong sense of identity with their own instruments that might have narrowed their focus. Perhaps music students disregard topics outside their field of study because the conservatoire setting is one in which high levels of perfectionistic strivings develop alongside increasing levels of expertise, a strong competitive environment and high self-expectations (Araujo *et al.*, 2017; Stoeber and Eismann, 2007).

Practical sessions could allow students to experiment with some of the tools discussed in lectures and seminars and engage with their topics from multiple perspectives, potentially facilitating meaningful insights. On this occasion, factors such as time, planning and the

lecturers' expertise did not allow for practical sessions beyond focused small-group discussions and debates. Students already have a rich experiential perspective on issues such as pain and performance anxiety and tend to find discussions oriented to their personal experiences more interesting and helpful than overviews of the theoretical literature. Finally, they may reject the invitation to explore a range of solutions for themselves in favour of 'quick fixes', which they think will guarantee success. Sensitisation, whereby mere mention of an issue can cause it to be experienced or exacerbated, could be explained by the Baader-Meinhof phenomenon or frequency bias (i.e., the perception that something of which one has recently become aware is happening all the time). It could also be explained by the fact that anxiety was mostly discussed in lectures, in theoretical terms, rather than being explored practically via guided imagery, relaxation and performance exposure exercises.

Some singers found it uncomfortable to discuss mental health in a group situation. The lecturer could have addressed this by making it explicit that taking part in such a discussion was optional and that students were not expected to disclose any personal or otherwise sensitive information. As for the barrier represented by perceived lack of access to the health services provided by the college, relevant information about in-house and external services could be provided by all the lecturers in every lecture and seminar of the health education programme. The college counsellors could be invited to speak to students and facilitate a dialogue with them. This would give students the opportunity to familiarise themselves with the counsellors and ask questions, and might make them less reluctant to make use of their services.

The data contributing to Theme 4 consisted of suggestions for improving the programme. Participants asked for more information on most of the relevant topics, such as how to spot mental health problems in their peers; healthy affordable eating; physical exercises and relaxation techniques; and advice on sleep. These findings seem to be in line with the students' essays submitted for the purpose of course assessment, which also represented a source of data. In these essays, students were asked to talk about some new information that they have learned during the programme and that was useful for their music making. Out of the 103 essays submitted, over half were about managing MPA or life skills and behavior change techniques. Participants wanted more sessions in small groups so they could have more intimate conversations and share their experiences of struggling; more input from role models; and more access to sources of information. One participant justified the need for injury management by saying that "I know what me and all my peers are like . . . we'll just keep powering through even no matter what everyone's told us, so if we can get educated on how to care for our injuries afterwards, that would help . . . maybe" (P1). This could reflect a 'no pain, no gain' belief, supporting other participants' proposal that pain be normalised. Or perhaps the participant meant that they and their fellow students focus so much on the music when they play that they have become used to ignoring physical symptoms. Some evidence from qualitative research on experiences of pain in musicians suggests that they perceive a strong connection between health and performance such that pain can indicate that the performer must be doing something wrong (Schoeb and Zosso, 2012) or, conversely, that performers ignore the pain they experience as they strive for perfection (Nygaard Andersen, Roessler, and Eichberg, 2013). According to the finding of the analysis of quantitative data, respondents reported low levels of pain, comparatively infrequently. It may therefore be the case that students tend either to ignore or deny pain.

Finally, the data contributing to Theme 5 included instances of potential misinformation. It is unclear whether the lecturer actually misinformed students or if participants had misunderstood. For example, two reported that they had been told that weightlifting was not recommended for singers. It is unclear on what basis any lecturers would recommend singers

to refrain from certain types of physical activity. A third participant said she wanted to be reminded if the posture in which she happened to be sitting at her computer was right or wrong. The idea of correct posture is debatable (O'Sullivan *et al.*, 2012). While awkward or asymmetrical posture may have a role in physical injuries, it is unclear whether this is unavoidable given that it is intrinsic to the respective instrument, or we may be talking about specific adjustments that individuals can make to their posture in order to reduce the risk of injury (Manchester, 2014). Providing accurate information on physical activity may be important. In a previous study, we found that music students in the UK do not know what the recommended guidelines for engagement in physical activity are (National Health Services [NHS], n.d.). Similarly, only 62% of 110 students from British conservatoires, had been informed as to why they should engage in aerobic/cardio physical activity (Matei and Ginsborg, 2020).

Participants in the present study echoed those who took part in the evaluation of Clark and Williamon's (2011) mental skills programme. This study's participants reported increased awareness of effective practising strategies and health-related topics; improved practice efficiency and health-related behaviour; and changed views on musicianship in the broader context of health and lifestyle. They also suggested similar improvements: they wanted to hear from other musicians, both students and professionals; practical sessions focusing on the application of skills rather than lectures on theories and research findings; a focus on the application of skills; and more performance opportunities. There was also a parallel between this study's participants and the music students and recent graduates interviewed by Perkins *et al.* (2017), who reported barriers to accessing support services such as not knowing that they existed or how to seek help, a finding that highlights the importance of making students aware of the support available, generally. As mentioned in the introduction, this study is part of the first evaluation of a UK-based health education programme for conservatoire students that looked at both mental and physical health; the first UK-based health course evaluation that measured outcomes relevant to health literacy, such as knowledge, awareness, competency, and responsibility, and health-related behavioural changes using validated tools; the first evaluation of a health education programme for music students that incorporated qualitative findings from one to one interviews; and the first project of its kind that documented the course design based on comprehensive, up-to-date literature reviews.

The limitations of the study need to be acknowledged. Selection bias, social desirability, interviewer bias and the financial incentives offered might have increased the likelihood of positive feedback. Some of these biases are particularly relevant given that the authors were active in both the design and the delivery of the course, while the first author conducted the interviews. Given that the programme finished in February and the interviews took place in April, source amnesia may have affected the accuracy of participants' reports. Of course, although participants reported behavioural changes, it is unclear whether they were sustained or are sustainable long term. The authors are both musicians; they wanted to remove or at least minimise barriers to engagement and respond to students' needs; this may well have coloured their interpretation of the results. Nevertheless the advantages of the first author's "insider" status as student researcher as well as teacher and interviewer outweighed its potential disadvantages (Le Gallais, 2008). The "practitioner researcher" is not only more likely to possess empathy than the "outsider" researcher but also to appear credible to participants (Robson, 2002), thereby enabling rapport to be developed swiftly and effectively. However, an external (musician) evaluator might have obtained less biased data if they had not been involved at least in the delivery of the course.



Findings suggest several avenues for future research and practice. For example, health-related training offered to music educators may need to be explored further given, on one hand, their credibility and the trust placed in them by music students (Wijsman and Ackermann, 2018; Williamson and Thompson, 2006), and, on the other hand, the potential instances of misinformation that music educators may unwittingly convey in their teaching. Teachers were mentioned as a main source of information on preventing pain, for example. It may be particularly important to provide a compulsory health education programme for first-year students given the higher levels of depression, stress, and negative affect reported by third-year students (Matei et al., 2018).

Also, more research could be conducted on creative approaches to health education, making them as relevant and useful to music students as possible, given the importance of health education to musical performance. Applied sessions are more attractive to young musicians than theoretical sessions, and could remove some of the barriers referred to by participants, such as "lack of specificity" and "not enough focus on solutions". In addition, students are more likely to engage in healthy behaviours if ways of implementing them as part of their daily routine continue to be discussed. They might particularly welcome practical tools for effective practice, memorization and stage/performance preparation, given their their potentially significant impact on, and relevance to students' wellbeing. After all, merely raising awareness of these matters seems already to have motivated some students to initiate relevant changes. It could be especially useful for students to hear from established musicians who have struggled themselves with health or wellbeing issues and are prepared to offer reassurance, help normalise potentially sensitive topics, and reduce the stigma associated with such challenges. Researchers and educators should be encouraged to reach out to young musicians, listen to their views and engage them in jointly designing interventions that are fit for purpose, and grounded in students' needs. Such programmes could not only help raise awareness of musicians' health problems, but they can also contribute, as seen here, towards the widening perspectives of students on what it means to be a musician. Furthermore, given the undesirable changes in health-related quality of life and positive affect found in the pre-post quantitative evaluation, such programmes may be particularly needed throughout the academic year and across years, rather than only at the beginning of musicians' tertiary-level studies.

Speaking of wider perspectives, it is high time that the importance of studying complex settings is recognised, as well as the social, structural, political, legislative, and ideological factors that determine the health and wellbeing of individuals. Along the lines of a settings-based approach, Wijsman and Ackermann (2018) mention that a cultural shift is imperative. While raising awareness of health-related issues has its place, and is indeed at the core of health education, health promotion is more than health education. For example, participants mentioned barriers such as lack of perceived access to health services provided in college, as well as environmental and social barriers that included feelings of isolation, lack of time and energy. Also, the overall curriculum may need to be adjusted in order to leave space for other activities that enrich the health and wellbeing of individuals. It is futile to encourage students to sleep, relax, and engage in physical activity more while simultaneously constraining them within schedules that are so packed that they do not permit breaks to be taken, reminders that they need to practise as many hours per day as possible, and so much pressure and competition that some students may even lose sight of why they chose to study music (Pecen et al., 2018; Perkins et al., 2018). It is even worse if we do not provide the time, space and encouragement for students to reflect on what they do. Instead of training young musicians to be resilient and adapt themselves to the world of classical music, it may be necessary to shed more light on restrictive norms in classical music by discussing them more openly as part of a

training in critical thinking that is currently lacking in British conservatoires. The traditional career path is perceived as being less relevant given the changing and diverse nature of music industry and, as such, conservatoire curricula may need to reflect this (Palmer and Baker, 2021; Pecun et al., 2018). Unfortunately, in classical music, conformity is still prized to the detriment of innovation in a rigidly enclosed bubble where students and teachers strive to maintain the status quo, with teachers relying on students to carry their legacy further and students having to obey their influential teachers in order to be more employable (Leech-Wilkinson, 2018, 2020; Palmer and Baker, 2021). When 49 first year music students at an Australian conservatoire were asked about their future musical careers, their responses revealed a gap between their hopes and their expectations. While most of the students hoped to perform as professional musicians, few expected to travel nationally or internationally. They did not mention teaching as an aspiration, but they expected to teach. According to the authors of the study, Bennett and Bridgstock (2015), these young musicians had a narrow career identity. They may not have been aware of the wider variety of roles available to them, or perhaps they were just ignoring them. In this context, encouraging students to engage in extra-curricular learning, diversify their artistry, think critically about traditional values, redefine success, and develop a more flexible and versatile identity (Carruthers, 2012; Perkins, 2012), as well as an "enterprising or pioneering mindset" (López-Íñiguez & Bennett, 2020, p. 8), are worthwhile goals to be enabled by systemic approaches potentially involving changes at several levels of music education. Granting permission for musicians to demonstrate more individual creativity and artistic autonomy, and take more opportunities for genuine exploration should have a positive impact on their wellbeing (Leech-Wilkinson, 2020) and ultimately that of their audiences.

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[insert – Supplementary Material S1. Interview schedule - here]

[insert – Supplementary Material S2. Exhaustive list of quotes - here]