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# Music students' experienced workload, livelihoods and stress in higher education in Finland and the United Kingdom

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## ABSTRACT

Neoliberal education policies – viewing students' life as human capital, economic investment for the labour market and consumer power – may increase students' workload in higher education. In this mixed methods study, we examined music students' experiences of workload in Finland and the United Kingdom in connection with stress and livelihoods. We used Bayesian mixed effects ordinal probit regression modelling to estimate effects of countries and livelihoods as predictors for music students' experienced workload in relation to their main subject of study (or principal study) and stress. We analysed music students' lived experiences of workload to find further predictors for the developmental work in universities and educational policies. Results indicate that where neoliberal university culture impacts on music students' livelihoods alongside their studies, this is likely to increase stress but not necessarily impact on the workload associated with their main subject of study. However, stress has a notable effect on students' experiences of workload. We suggest paying attention to certain aspects in universities in relation to workload, such as the gap between well-off students compared to low-income students who need to work, and stress, particularly with female and non-binary gender students. Furthermore, we propose alternative ways to navigate neoliberal university culture.

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## KEYWORDS

Higher education;  
livelihoods; music student;  
stress; student experience;  
student workload

## Introduction

The Finnish Student Health Survey of students in higher education, between 2000 and 2012 (i.e. Oksanen et al. 2017), indicates an alarming 12-year trend of increasing stress levels and symptoms. The results of the survey suggest that the main reason for this increase relates to 'growing multi-faceted environmental demands' (113), such as 'rapid social and socioeconomic changes with effects on lifestyle, working life, employment and education' (118). According to Leahy et al. (2010), similar trends have been reported in many other countries which may indicate that existing mental health treatment options may be inadequate or traditional support systems in student services not appropriate for students. In the field of music, the way that students experience their own workload in particular can have an impact on stress and how students cope with their studies (Jääskeläinen, López-Íñiguez, and Phillips 2020). Instead of measured objective load, workload in this

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context is understood as music students' subjective experiences during their university studies. In addition, for music students, specific aspects of their workload based on their intense engagement with their musicianship arise, such as a holistic and life-long relationship with music (Jääskeläinen 2020b). Research by Jääskeläinen, López-Íñiguez, and Lehtikainen (2020) indicates that in higher education, music students, especially women, often feel distressed. Remarkably, male students in particular use proactive coping styles which seem to help reduce stress. However, music students' experienced study workload and determination in their pursuit of a career in music is only one of the factors that may contribute to the stress that they experience.

Music students in higher education particularly enjoy studying their main subject, such as playing one or more instruments or singing, and many of them report having inspirational relationships with their teachers in their one-to-one tuition. This relationship with their performance or composition teacher remains very strong despite students being exposed to rather different teaching styles amongst tutors, and sometimes conflicting personalities and methods (Jääskeläinen and López-Íñiguez 2020). If workload in music studies and relationships with music teachers with diverse teaching styles is not causing music students a considerable overload, then it is important to explore which additional environmental and intra-individual factors may be connected to music students' experienced workload in higher education. Exploring music students' responses to multiple aspects of the workload involved in studying their main subject, livelihoods and stress in two different countries – Finland and the United Kingdom<sup>1</sup> – offers an opportunity to learn more about this. Such an investigation may shed light more directly on whether differences in experienced workload are predominantly driven by environmental (e.g. the university system impacting on students' livelihoods whilst studying) versus individual (e.g. gender) factors. This kind of approach may help educational institutions to improve the support systems for students and advance educational policies in Western countries.

According to Gyamera and Burke (2018), neoliberal agendas are guiding many governments and higher education policies – thus impacting also the curriculum – by advocating for the benefits of maximising market forces in human actions and in public life. In this kind of university culture of academic capitalism (Slaughter and Rhoades 2004; Slote 2012), students' relationships to educational ideas, choices in studying, graduate attributes, work and lifelong learning are viewed as human capital, economic investment for the labour market and consumer power (Johnston 2011). It is notable that the neoliberal agendas in academia have faced increasing criticism in recent years (see e.g. Fanghanel 2012; Fitzpatrick 2019; Lewis 2005; Thornton 2012).

For instance, Lund (2020) argues that neoliberal university reform in Finland (see e.g. Pekkola 2009) has led to the reproduction of gendered and class-based social inequalities and also to an ever-widening gap between the people who succeed and those who fail to perform in line with the new quality standards. In the United Kingdom, the neoliberalisation policy agenda has reconfigured the public university by laying foundations for a fully marketised provision, for instance with variable tuition fees in higher education (Maisuria 2014). In contrast to the United Kingdom, higher education institutions in Finland have low tuition fees but selective entrance examinations which have an impact on the educational equality, equity and justice when linked to the cumulative advantage or disadvantage of the student's family, school, and community circumstances (Jääskeläinen 2020a).

The neoliberal university culture can be a challenging learning environment for students – especially for women and minority group students with heavy workloads – when they try to find optimal balance between study and their livelihoods (Beban and Trueman 2018). The neoliberal university agenda has led to the situation where part-time work is becoming essential for students in order for them to manage their finances (Mitchell 2020) and to prepare for their future careers whilst studying (López-Íñiguez and Bennett 2020). However, some students are struggling to balance paid work and other issues in life, which can impact on retention, quality of academic learning, burnout and achievement – especially with students who have less academic or less well-resourced family backgrounds (Yahanpath and Burns 2011).

Karlsen (2019) suggests that imagining and taking the world beyond neoliberalism in music education practice and academia can happen through activism and by embracing musicians' own vulnerability. In this study, our main aim is to listen to music students' vulnerabilities with regards to the predictors and determinants involved in students' lived experiences of workload. We approached this in relation to livelihoods and stress in higher education in Finland and the United Kingdom. The following research questions were developed:

1. Are there any relationships between music students' experienced main subject (or principal study) workload and livelihoods (including socio-demographic characteristics, working whilst studying, funding and loans) and experienced stress in higher education in Finland and the United Kingdom?
2. What environmental factors determine music student's experienced workload in higher education in these two countries?
3. How could the predictors and determinants of environmental factors affecting music students' workload inform the development of university cultures and educational policies?

### ***Environmental factors affecting music students' experienced workload in higher education***

A systematic review conducted by the authors of the current study (Jääskeläinen, López-Íñiguez, and Phillips 2020) indicates that, in addition to developing (1) interventions to support music students' ability to cope with their workload and (2) tools for teachers to support music students' workload in the best possible ways, it is important to (3) understand the environmental factors that relate to students' positive and negative experiences of workload in higher education. The results indicate that to support students, institutions should develop student feedback systems, discuss students' workload problems in the university, and recognise demands and challenges for students in combining studying and working life. In fact, Kember (2004) argues that it is possible to increase students' motivation and time devoted to learning if workload is appropriate.

Previous research shows that taking several steps in the teaching and learning environments can help music students in particular to cope with their workload in higher education. Research by Bernhard (2007a, 2007b, 2010) shows that it is crucial to examine and revise the music curriculum to develop ways in which required workload and musical expectations might be best optimised for helping music students to reduce burnout and to be able to manage their academic and personal lives. According to Hamann and Daugherty (1985), music student burnout can be reduced with guidance in relation to: (1) a student's individual goals in studying and (2) their professional development. This guidance should be accompanied with appropriate financial support and assistance, as well as a clear and transparent curriculum.

Other studies highlight that students and teachers in music settings should actively participate in producing and utilising research-based knowledge in the development of learning and teaching (Jääskeläinen 2016). Moreover, the institutional environment should promote student collaborations and initiate learning activities which allow students to flourish and realise their potential (Papageorgi et al. 2010a, 2010b; Reid 2001). It is important that universities provide teachers and students with research evidence and recent findings about musicians' and music students' health and well-being (Williamon and Thompson 2006; Zetterberg et al. 1998).

## **Method**

### ***Hypotheses***

In this study, we hypothesise that students' experienced stress may be strongly connected to their experiences of workload in the study of their main subject, and that there are differences between

countries depending on the university culture. It is not our aim to compare the results from both contexts studied here, but to highlight context-based differences as environmental factors that should be addressed by the educational agents in charge of curriculum and policy development.

Thornton (2016) argues that consideration of the neoliberalisation of higher education as one of the main causes of stress has not been given the attention that it is due in the literature. This argument emphasises the fact that the neoliberal agenda impacts directly on the high level of tuition fees, larger-than-average group sizes of students in classes and is linked to an employment industry, which is ever more competitive. We might expect students who are more affected by the negative consequences of the neoliberalisation policy agenda in their countries, such as high tuition fees affecting their livelihoods, to experience more stress in higher education. This can also impact on their experiences of workload and the degree to which they cope with their workload in their studies. Thus, we consider livelihoods to be an essential environmental factor in this study and we might expect that students who are working as well as studying should report higher levels of experienced overload in their studies. Yet, as it seems that more and more music students are working alongside their studies, it remains unclear how the content and amount of paid work impact on students' study load.

In addition to working alongside studying, students' situations regarding funding and loans are crucial parts of their livelihoods which we expect to impact on their experienced workload. A person's livelihood is usually considered too narrowly when understood in the everyday meaning as working and earning resources for living (Weston *in press*). When thinking about music students, the concept needs to be defined more widely, as a university level course of study plays a crucial role in providing students with transferable skills and competences for their music careers (Bartleet et al. 2019). Still, neoliberalisation leads to a disregard for levels of stress, and instead these are left to the individual to deal with, or to the market to resolve (Thornton 2016). Thus, in this study, we expect that music students' experienced workload is connected with their experienced stress and influenced by their livelihoods, such as working, funding and loans, including specific socio-demographic characteristics, such as gender, educational level and music genre studied.

## **Research design**

Within this study, we used a sequential explanatory research design consisting of a quantitative stage followed by a qualitative stage (Ivankova, Creswell, and Stick 2006) to answer the first and second research questions respectively. We first analysed the data separately and subsequently grouped and analysed data together in order to address the third mixed methods research question. It should be borne in mind that the concept of music students' workload is a complex phenomenon and our systematic review mentioned above indicates that it has not yet been thoroughly explored. In light of this, our main motivation for gathering both quantitative and qualitative data in this study was to arrive at a richer and more thorough understanding of music students' experiences of workload than could be accomplished through either of these methods exclusively (e.g. Hesse-Biber 2015).

## **Participants**

### **Sample**

We randomly selected seven university-level music institutions in Finland and the United Kingdom and the invitation to participate in this research was sent via student email lists. The invitation email included a brief description of the study and the questionnaire. Also, an information sheet which outlined the nature and purpose of the study was provided. Participation was voluntary and confidentiality of information was assured. Reminder invitations were sent via email to encourage students to participate. A total of 155 music students in five different institutions completed the

**Table 1.** Socio-demographic characteristics of all participants in the sample (*N* = 155).

Background	%	Main subject studies	%	Livelihoods	%
<b>Country</b>		<b>Genre</b>		<b>Work alongside studying</b>	
Finland	69.7	Classical music (UG or PG)	43.2	Not working	31.6
United Kingdom	30.3	Music education (UG or PG)	24.5	Working *	68.4
<b>Gender</b>		Other genres	32.3	Work related to music **	58.7
Female	68.0	<b>Study programme</b>		Work not related to music ***	21.9
Male	30.1	Classical string	13.5	<b>Funding</b> (scholarship/family/other source)	
Non-binary gender	2.0	Classical wind	9.7	No funding	43.5
<b>University level</b>		Classical piano	6.5	Partial funding	29.9
Undergraduate (UG)	52.9	Classical early music	3.2	Full funding	26.5
Postgraduate (PG)	42.6	Classical other instruments	3.2	<b>Loan</b> (to cover study and/or living costs)	
Other (junior or doctoral)	4.5	Classical voice and opera	7.1	No loan	56.5
<b>Interview participants</b> ( <i>n</i> = 29)	18.7	Music education	24.5	Loan	43.5
Finland ( <i>n</i> = 20)		Composition	7.7	<b>Weekly working hours</b>	
United Kingdom ( <i>n</i> = 9)		Church music	12.3	* <i>M</i> = 12.56, <i>SD</i> = 10.03	
Female ( <i>n</i> = 21)		Folk and global music	4.5	** <i>M</i> = 9.31, <i>SD</i> = 8.38	
Male ( <i>n</i> = 8)		Other programmes	3.9	*** <i>M</i> = 14.4, <i>SD</i> = 9.40	
		Doctoral programmes	3.9		

questionnaire. In the questionnaire, students could express their willingness to be contacted for further research and 29 students volunteered to participate in the interviews. Socio-demographic characteristics of all participants are given in Table 1.

**Ethical statement**

Uniarts Research Ethics Committee in Finland and Conservatoires UK Research Ethics Committee in the United Kingdom granted approval for the current study after their review of the method, research tools, and participant informed consent and information sheet (the latter also had an invitation to take part in the study and made clear that participation was voluntary). Research permissions were obtained from participating institutions in Finland and in the United Kingdom. Study participants were informed that they provided their consent by submitting the questionnaire. Interview participants provided written consent. The participants were not compensated for their time.

**Quantitative phase**

**Data collection**

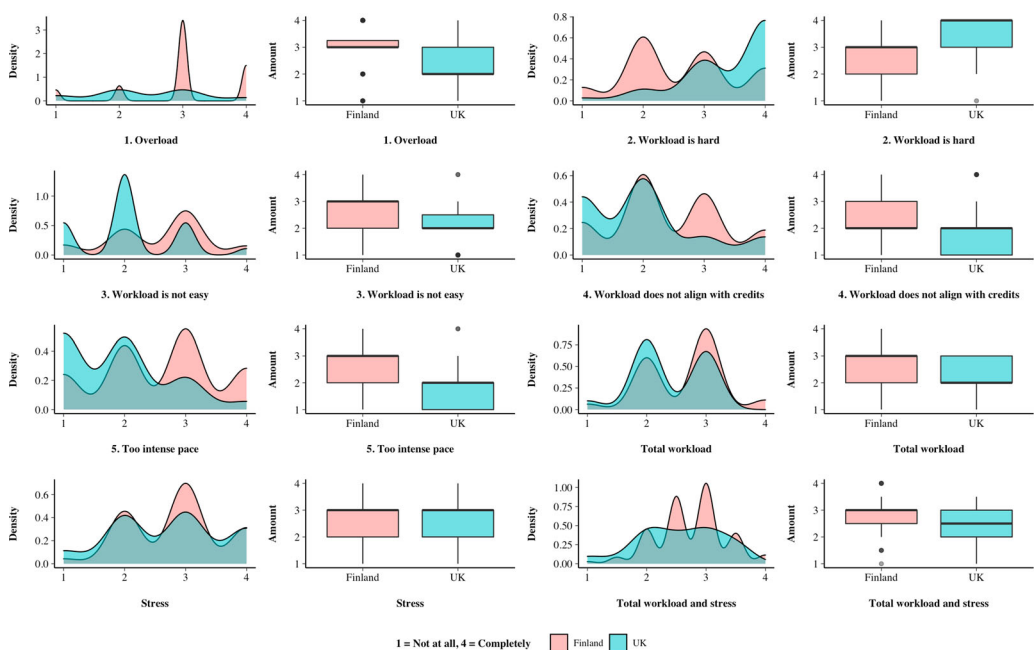
We created an assessment instrument entitled the Workload, Stress and Coping (WSC) questionnaire. In the quantitative phase of this study we utilised data collected with the Workload and Stress section which included the standardised study workload and stress section of the Learn questionnaire used in the Finnish higher education context (see Parpala and Lindblom-Ylänne 2012). We gathered data online through SurveyPAL-questionnaire (see Appendix for data collection instrument).

**Data analysis**

We utilised the Bayesian approach for conducting the statistical analysis by using RStudio (RStudio Team 2016) with the R language and environment (R Core Team 2017). According to Guckian et al. (2020, 13), ‘the Bayesian framework incorporates existing information about the subject matter (priors) with the observed data (likelihood) to generate estimates of interest (posterior)’. A compact introductory-level overview of the Bayesian approach to statistical inference with RStudio can be found in Heino, Vuorre, and Hankonen (2018).

The quantitative data sample in our study consisted of junior,<sup>2</sup> undergraduate, postgraduate and doctoral students from five university-level music institutions in Finland (108 students) and the United Kingdom (47 students). The response rates (9% in Finland and 1% in the United Kingdom) were relatively low which is quite common when conducting research in institutions where university students receive regular requests to volunteer to take part in survey research and when the prevalence of online surveys has increased survey fatigue (Porter, Whitcomb, and Weitzer 2004). However, even low response counts, such as 50 respondents, can provide reliable estimates and a response rate of 5% can be considered reliable when at least 1,000 students have been contacted to ask them to participate (Fosnacht et al. 2017). According to Low-Choy, Riley, and Alston-Knox (2017), when dealing with small samples and missing values as gaps in the data, Bayesian statistical modelling can provide valid results. Moreover, ‘a vaguely informative prior’ can help overcome issues with small data sets (320). For example, when we chose predictors for the modelling, our a priori knowledge was derived from our previous phases of research with a systematic review and theoretical and empirical studies and with our experiences of working with music students.

A single item assessed students’ current feelings of stress. Although single item measures for psychological phenomena have been argued to raise issues in terms of reliability and validity, in their study of undergraduate students’ perceptions Bergkvist and Rossiter (2007) found no difference in predictive capability between multiple item measures and single item measures. Freed (2013) argues that a single item measure can be sufficient in a case when the measured construct is narrow. Thus, we considered a single item to be sufficient with the concept of feeling stress, especially because it was clearly explained in the questionnaire as being connected with the situations in which students feel anxious, restless, nervous, or distressed or when students have difficulties sleeping because their problems are continuously playing on their mind. Item responses ranged from 1 = *Not at all* through 4 = *All the time*. The study workload scale included two positively and three negatively worded items assessing students’ experiences of workload when considering their studies of their main subject as a whole (an example of a negatively worded item was ‘I must work very hard with my main subject studies’). For the analysis, positively worded items were re-coded



**Figure 1.** Music students’ responses to experienced main subject workload and stress items by countries.



and re-worded so that higher scores indicated greater experienced workload. Correlations between stress and workload items ranged from weak negative (workload items 2 and 4: Kendall's tau  $b = -.001$ ,  $z = -1.87$ ,  $p = .85$ ) to strong positive (workload items 1 and 5: Kendall's tau  $b = .458$ ,  $z = 6.54$ ,  $p < .01$ ). [Figure 1](#) indicates the response patterns by countries to five workload items, total workload, stress, and total workload and stress combined.

In order to build models to predict music students' responses to experienced main subject workload and stress, we included multiple covariates for evaluating their potential effect on these experiences. In addition to a participant's country, we included gender, university level, and music genre. In this study, the term 'music genre' is used to refer to the main focus on the programme of study. Possible options in the current study included classical music, music education and all other study programmes combined to a one group (for detailed analysis with study programmes, see Jääskeläinen, López-Iñiguez, and Lehtikainen 2020). To analyse music students' livelihoods as predictors in the model, we added their responses to working whilst studying, funding and loans. We performed Bayesian mixed effects ordinal probit regressions for the model evaluations to identify variation across each workload item and the stress item and across individual responses (see a compact tutorial for ordinal regression models with RStudio in Bürkner and Vuorre 2019). In the final analysis process and in reporting results with measures and visualisation, we followed an open access data analysis procedure by Guckian et al. (2020) consisting of a profound description of Bayesian approach and a detailed coding script for Bayesian modelling with RStudio.

## Qualitative phase

### Data collection

The qualitative data consisted of 155 participants' (108 in Finland and 47 in the United Kingdom) answers to open-ended questions in the WSC questionnaire and interviews with 29 participants (20 in Finland and nine in the United Kingdom). The semi-structured interviews were conducted one-to-one by the first author either during in-person meetings or remotely in audio-meetings via Skype or WhatsApp, each lasting between 30 and 90 min. The topics consisted of questions which encouraged students to reflect on their experiences of workload, stress and how they coped as music students in higher education. The procedure involved in the interviews is discussed in more detail in Jääskeläinen, López-Iñiguez, and Lehtikainen (2020).

### Data analysis

We used the Atlas.ti software to code and analyse the qualitative data. The analysis was performed by the first author in collaboration with the second author, who ensured the validity and reliability of the process by coding 5% of the data. The inter-rater agreement of the coding was calculated using Holsti and Krippendorff's Alpha, and were favourably calculated as .924 and .918 respectively, both considered as very highly satisfying levels of reliability. We built a thematic coding framework based on 13 themes, four thematic groups, and three synthesised categories derived from our systematic review mentioned above (deductive analysis). Following the analytical process of transcendental phenomenology (see full procedure presented in Jääskeläinen 2020b), we added further depth to the framework by adding the 14 themes extracted from data based on the interviews (inductive analysis), in order to clarify and incorporate music students' lived experiences in relation to workload while studying in higher education. The analysis continued through the process of horizontalisation (see Moustakas 1994) in which we listed, grouped, and coded all relevant expressions in relation to workload for each interview and questionnaire participant's data. For the purpose of this study, we continued the analysis with the extracts linked to the category of environmental factors. The Finnish participants' quotes were translated from Finnish into English by the first author, who speaks both languages, and corrected by the third author, who is a native English speaker.



## Mixed methods

The final step in the data analysis procedure involved integrating quantitative and qualitative findings. We utilised the experiences relayed by the student interviewees and answers to open-ended questions to gain a deeper understanding of the topic – or the phenomenon when investigating human experiences – to create visions and suggestions which may be used in future plans for adding in or omitting predictors of the Bayesian models. When considering such a mixed methods approach, one advantage of Bayesian statistical modelling is that it can build links between quantitative and qualitative data and connect quantitative and qualitative phases (Low-Choy, Riley, and Alston-Knox 2017). Thus, the mixed methods approach utilised in this study may offer valuable research-based knowledge – and a model of how to utilise students’ feedback in the most beneficial way – to feed into developmental work in universities and educational policies.

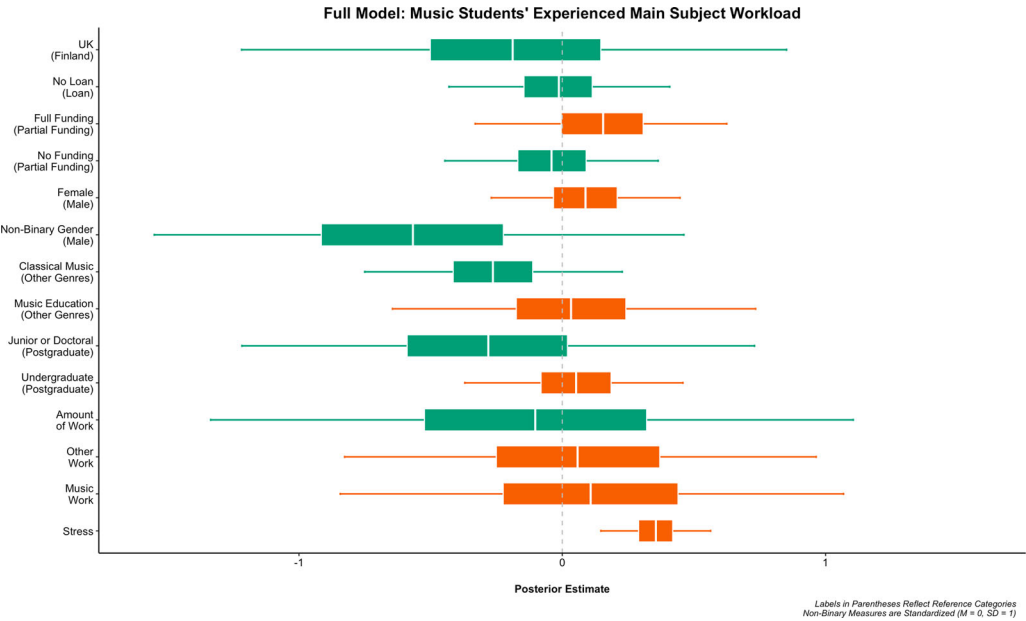
## Results

### Quantitative results

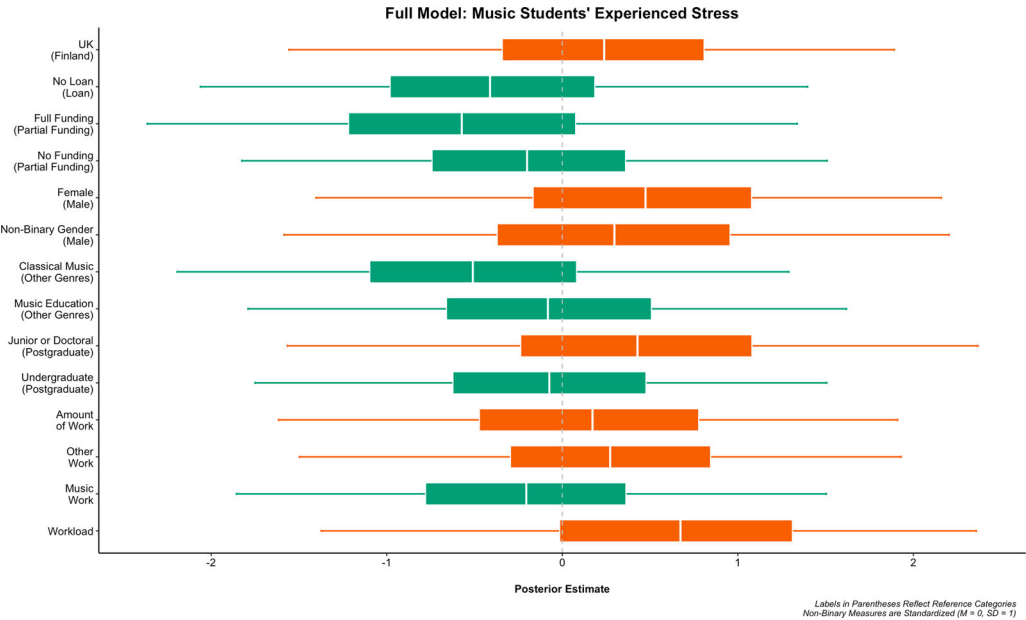
To answer the first research question about possible relationships between music students’ experienced workload in their main subject of study and their demographics, livelihoods and experienced stress in higher education, we built four Bayesian ordinal probit regression models. Two of the models in Figure 2 are simplified mixed effects regression models indicating the direct influence of music students’ countries on their experienced main subject workload and stress. The third model in Figure 3 is a larger mixed effects model showing the influence of countries on main subject workload evaluated in relation to music students’ experienced stress, gender, university level, music genre studied and livelihoods. The fourth model in Figure 4 is similar to the third model but instead of workload it indicates the influence of countries on stress, evaluated in relation to music students’



**Figure 2.** Population and group-level effects of main subject workload and stress experienced by the music students in Finland and the United Kingdom. On the right-hand panel, left-hand side boxes indicate that the effect on four workload items and one stress item is greater in Finland than in the United Kingdom, and right-hand side box indicates that the effect on one workload item is greater in the United Kingdom than in Finland.



**Figure 3.** Population-level predictors of experienced main subject workload, derived from a Bayesian mixed effect probit regression. The boxes indicate 50% posterior intervals and the lines indicate 95% posterior intervals. With binary items, left-hand side boxes indicate a smaller effect on workload than in the reference group in brackets and right-hand side boxes indicate greater effect on workload than in the reference group in brackets. With the working and stress items (the four bottom items on the figure), left-hand side boxes indicate a negligible effect on workload and right-hand side boxes indicate a greater effect on workload the nearer the box is to the right-hand side.



**Figure 4.** Population-level predictors of experienced stress, derived from a Bayesian mixed effect probit regression. The boxes denote 50% posterior intervals and the lines denote 95% posterior intervals. With binary items, left-hand side boxes indicate a smaller effect on stress than in the reference group in brackets and right-hand side boxes indicate a greater effect on stress than in the reference group in brackets. With the working and workload items (the four bottom items on the figure), left-hand side boxes indicate a negligible effect on stress and right-hand side boxes indicate the greater effect on stress the nearer the box is to the right-hand side.

experienced workload, gender, university level, music genre studied and livelihoods. Instead of testing the null hypothesis or calculating the statistical significance by using the regression estimates, the analysis reported here is based on (1) the estimation of the effects of countries – together with specific environmental and individual factors – predicting music students' experienced main subject workload and stress, and (2) depicting the uncertainty of these estimates by investigating posterior distributions with posterior medians and 95% highest posterior density intervals (Guckian et al. 2020). Detailed explanations of the figures are provided in the figure captions.

### ***Countries and music students' experiences of main subject workload and stress***

For the first two models in Figure 2, we examined the effect of country on music students' experienced workload and stress separately using a mixed effects probit regression. We allowed the intercept of the models to vary across each group-level intercept with each participant and separately with the workload items and the stress item. With a group-level slope in the models, we allowed the effect of countries to vary across the workload items and the stress item separately. There was a negligible effect of countries on music students' experienced workload (Posterior Median =  $-.29$ , 95% HPDI =  $-1.30$ ,  $.80$ ) and stress (Posterior Median =  $-.20$ , 95% HPDI =  $-1.63$ ,  $1.42$ ). The scale point of music students in the United Kingdom compared to Finland was lower in terms of both the experienced workload and the stress (see the left-hand panel of Figure 2). There was a small amount of variability between participants in each set of ratings in workload (Posterior Median =  $.68$ , 95% HPDI =  $.55$ ,  $.82$ ) and great variability in stress (Posterior Median =  $2.76$ , 95% HPDI =  $.96$ ,  $5.77$ ). In addition, there were aggregate ratings by participants across each workload item (Posterior Median =  $.42$ , 95% HPDI =  $.13$ ,  $1.05$ ) and noticeable variability in stress item (Posterior Median =  $1.41$ , 95% HPDI =  $<.001$ ,  $5.49$ ). The group-level slope for countries was noteworthy both within each workload item (Posterior Median =  $1.23$ , 95% HPDI =  $.51$ ,  $2.60$ ) and stress item (Posterior Median =  $1.12$ , 95% HPDI =  $<.001$ ,  $5.49$ ), suggesting non-negligible variation in the effect of countries across each workload item and stress item (see the right-hand panel of Figure 2).

### ***Full model: music students' experienced main subject workload***

For the third model in Figure 3, we followed the above-mentioned procedure by testing the full model of countries affecting the music students' experienced main subject workload. We allowed the slopes of each predictor to vary across each workload item. Modelling all predictors at the same time slightly increased the effect observed previously in relation to a participant's country of study, however, the effect still remained negative. Experienced stress was the strongest predictor of experienced main subject workload in the full model. There was also an effect of funding, such that music students with partial funding or no funding at all were less likely to experience workload than students with full funding. Work related to music had a greater effect than work not related to music, but the total amount of work undertaken alongside a student's studies had a negligible effect on experienced workload. Female music students were likely to experience more workload than male or non-binary gender students. The level of the university studies in general had a relatively small impact on the results, however, undergraduate music students were likely to experience more workload than postgraduate students or junior and doctoral students. Music genre studied had little influence on the level of experienced workload, although studying music education had a greater effect compared to other genres whereas the classical music genre had negligible effect. Having or not having a student loan did not lead to any noteworthy effects. In line with the simplified workload model presented in Figure 2, in this full model there was variation across each participants' ratings, Posterior Median =  $.68$ , 95% HPDI =  $.53$ ,  $.83$ , and across each workload item in the group-level estimates, Posterior Median =  $.39$ , 95% HPDI =  $<.001$ ,  $1.07$ . The group-level slope for countries varied substantially across workload items, Posterior Median =  $1.18$ , 95% HPDI =  $.48$ ,  $2.45$ .

### ***Full model: music students' experienced stress***

For the fourth model in Figure 4, we followed the above-mentioned procedure by testing the full model of countries affecting music students' experienced stress. We allowed the slopes of each predictor to vary across the stress item. Modelling all predictors at the same time increased the previously observed effect of countries from negligible to positive indicating that music students in the United Kingdom are more likely to experience stress than music students in Finland. Experienced workload was the strongest predictor of experienced stress in the full model. There was also a noticeable effect of gender, such that female music students were more likely to experience stress than male students. With non-binary gender there was positive effect on stress which was contradictory to the negligible effect on workload in the previous full model. Both work not related to music and the total amount of work undertaken alongside studying had a small effect, but work related to music did not have an influence on stress. Junior or doctoral music students were much more likely to report experienced stress than postgraduate students or undergraduate students, which contradicts the full workload model in which being an undergraduate student had more influence on experienced workload. The music genre studied had no effect on experienced stress, nor did funding and loans. Compared with the simplified stress model presented in Figure 2, this model had remarkably greater variation in the group-level estimates across each participants' ratings, Posterior Median = 4.70, 95% HPDI = 2.17, 8.32, and great variation across stress item, Posterior Median = 1.64, 95% HPDI = <.001, 6.28. Also the group-level slope for countries varied substantially across the stress item, Posterior Median = 1.32, 95% HPDI = <.001, 5.18.

### ***Qualitative findings***

To answer the second research question regarding environmental factors affecting music students' workload, we aimed to gain an understanding of music students' experienced workload, livelihoods and stress in higher education more broadly and in more depth. Qualitative findings resulted in recurrent ideas which were categorised according to 13 themes from deductive analysis and 14 themes from inductive analysis (see Method section). These 27 themes were separated into four thematic groups: General framework (or structure) of music students' workload (six themes), music students' workload whilst studying (nine themes), music students' workload in relation to teaching and learning environments (six themes), and psychological and physiological issues in studying music (six themes). To illustrate the findings of the qualitative analysis process and how the themes were categorised into four thematic groups, Table 2 consists of excerpts from the participants' reflections on the determinants of music students' experienced workload in relation to environmental factors in higher education.

### ***General framework of music students' workload***

According to participants' experiences, combining studying and working seems to be a big challenge for music students and this makes it difficult to determine which workload derives from work and which from studying. Although working alongside studying is often essential because of financial needs, work related to music is felt to be enjoyable and even invaluable for music students' future careers. However, some participants bring forth an equality issue indicating a big gap between well-off students (e.g. full scholarship or support from family) compared to low-income students who have to work long hours to earn their living. There are multiple factors which need to be considered as further predictors of the impact of the general framework of music students' workload: (1) pressure within the field of music negatively affecting music students' beliefs regarding their abilities as professional musicians, (2) idealisation of talented musicians, (3) competition and comparison in performing music, (4) social media strengthening the myth of innately talented artists in society, and (5) characteristics which may be unique to those students who have been devoted to a career in music since early childhood.

**Table 2.** Excerpts from the participants' reflections on the determinants of music students' experienced workload in relation to environmental factors in higher education.

Determinants of experienced workload in relation to environmental factors		
General framework of music students' workload		
<p><b>Framework of student workload:</b></p> <p>It is difficult for me to determine which workload is caused particularly by my studies. I feel that the biggest challenge is combining working and studying. However, structural problems related to the field of music is a topic that needs to be addressed and discussed. The pressures inside the world of music make me feel inadequate and insecure regarding my own professional ability and potential, and it really impacts on my workload. In my studies, the emphasis on and idealisation of talented musicians distorts my perception of the music industry.</p> <p><b>Competition:</b></p> <p>The most stressful thing is perhaps to always have to play my instrument in front of other music students and other people, for example music teachers. That kind of situation, involving comparison to other performers, is maybe the cause of stress. Or those kinds of auditions where musicians compete against each other, maybe they are the most stressful situations.</p>	<p><b>Funding:</b></p> <p>Being a self-funded student means my time management is noticeably harder than students that come from money or receive external funding. I feel like money prevents me being able to perform as well as my classmates, as I spend so much of my non-contact hours freelancing to the point where I don't get much sleep and can't spend as much time on study as my richer classmates. It feels unfair and prohibitive, like an eternal struggle that often leaves me depressed and overwhelmed.</p> <p><b>Social media:</b></p> <p>In a way, [one cause of stress is] when I see videos [on social media] posted by my friends in rehearsals or gigs and they have edited them to only show the clip where it sounds great. Of course, I would do that too if I published a video. But then it creates the illusion that everybody else can do it and that they don't need to practice. This is an example of that kind of myth of the artist in society - that I should potentially somehow already be talented and polished in what I am doing, and I do not need to practice.</p>	<p><b>Work:</b></p> <p>For me, it is the financial need in particular which forces me to work alongside studying. But the workload is also partly caused by me enjoying being able to work in my own field. I think that the same reason applies to many other students. Although they know that work during weekends and holidays causes extra commitments in the calendar, working is very beneficial for my current studies and for my future career.</p> <p><b>Musician career:</b></p> <p>Music students are probably to some extent a more homogeneous group [than other students], as I think that many musicians have gotten used to constantly working since childhood, and to expecting a lot of themselves. It is interesting to see how this affects music students' experiences in a university environment and how well the university takes into account these possible unique characteristics of the cohort of music students in particular.</p>
Music students' workload whilst studying		
<p><b>Approaches to learning:</b></p> <p>The biggest workload comes from the fact that you are never 'ready'. You could and should always practice a little bit more. As first year students we were told during our early days at university that we must remember during our studies that we could not do everything at maximum capacity. Still, it feels difficult to digest that kind of approach because I would like to complete everything as well as possible based on my skills, not as well as possible based on my resources at any specific moment. I constantly feel guilty and feel like an underachiever because I cannot give my best. At the same time, I am afraid of not making everything that I could have from my studies because of my poor effort.</p> <p><b>First year experiences:</b></p> <p>The first year of studying was difficult and almost traumatic. I felt that other students in my year group were competitive and one of them behaved like a bully. In addition, I</p>	<p><b>Coping:</b></p> <p>I have noticed that in general in society, as well as in my department, people tend to idealise those 'multitasking individuals' who keep on stating that it is possible to get the job done (even at the cost of their wellbeing). Yeah, it is great to live life at full speed, with lots of achievements in school and work and long days, in addition to being part of many kinds of events and other activities. I sometimes feel a little bit of remorse about not being able to, for example, go out to meet friends or invite them to my home after we finish studying.</p> <p><b>Practising:</b></p> <p>Then I need to adhere to my reservation for a practice room and time. That means that I must be able to estimate in advance how much I am going to need in terms of practice</p>	<p><b>Time management:</b></p> <p>The college workload isn't too big, because, as a musician there's only so much actual physical practice you can do a day, so that's not an issue. And the academic [studies] aren't an issue because they're not that heavily weighted, and there aren't that many of them. But it's fitting in the rehearsals around those things so you have, as a musician as well we have, the academic classes that everybody else has but then we also have lots of, performance and repertoires, like classes, so like things that the other schools don't have. And it's not a lot but then when you start adding in, like practicing on top of that and, like ensemble and if you get gigs, like it all starts to add up very quickly.</p> <p><b>Flow:</b></p> <p>I think that it [flow] is connected to those kinds of external aspects and also to my moods. I notice it in myself when I feel that I don't need to concentrate on anything extra, in a way,</p>

experienced difficulty moving to a new and bigger city and starting my university studies. I felt that the level of requirements was totally different to my previous school, right from the beginning of my studies. I imagined that everyone else already had the skills and knowledge required. I doubted my own skills. Why did they even accept me to study in this school? Was it just a mistake? What helped me then? I got an appointment with study counsellor, and I asked the 'bully' for a cup of coffee and explained how the bully's behaviour made me feel, I made friends with students from older year groups, I joined my department's student association, I discussed pressures with my classmates and I noticed that many other students experienced similar things to me. It also helped me to visit my home city and family during weekends.

#### **Meaning of musicianship:**

Studying music is pretty much that kind of holistic lifestyle, maybe, I would say for me. Since primary school I have studied music regularly and then at some point in adulthood I understood that this is not just studying anymore, this is, music is life [laughing].

time in a particular week. Then I also have ensemble rehearsals because I have a couple of concerts and there will be an ensemble in my assessed recital too. So, somehow, I have to organise rehearsal schedules with lots of people. That causes a difficult kind of workload when I have to figure out mine and other musicians' schedules.

#### **Enjoyment:**

I feel success when I have enjoyed doing or completing something. For example, exam concerts and other concerts in which I can play on my own or together with someone and when, in that moment, I feel deep love and joy for playing, for other performers and for the audience.

and then there is kind of a fast-flowing fountain to produce things. There are kind of optimal circumstances for me, so that I can feel comfortable and I know that I now have enough time. And I don't need to stress about it.

#### **Religion:**

Occasionally, when lots of deadlines are coming up in the same period of time, I can find myself getting stressed and feel overwhelmed. There are a couple of things I do when this happens. I rely heavily on God and my church. I feel a release of pressure when I pray, and I find that keeping the Sabbath day as a holy day is crucial to my wellbeing, spiritual, mental, emotional and physical.

Music students' workload relating to teaching and learning environments

#### **Teaching and learning environments:**

Yes indeed, I think there could be a course for students on how to organise time and everyday life, or even a kind of set of materials or that kind of thing. Because I can easily imagine that if you have lived for example some sort of relaxed high school life and managed with everything going well and no worries. And then you come here and suddenly there is awful pressure everywhere. You must be the best, you must succeed, you must prepare for your career and so on. So I believe that it can result in a very very heavy workload. And so on, indeed, I don't assume that any human being is able to manage that kind of thing from birth.

#### **Curriculum:**

Too many essays and too many projects. Some months I have nothing to do, and some months there are too many things. That keeps my schedules uncertain and gives me anxiety because I am not good at organising myself in such an unpredictable environment.

#### **One-to-one tuition:**

If I feel pressured by the teacher to do something that I don't feel like I can or want to do, I'll most likely get into some type of a complete anxiety attack. That's why I feel like teachers should be very well educated in pedagogy, especially as private music teachers. The relationship between a music student and their teacher is closer than in most other school situations, and it can get very difficult if the teacher doesn't sense the correct boundaries or crosses lines that they should be trained to detect instantly.

#### **Assessment:**

But in a way assessment in general, not only in music departments per se, but everywhere starting as early as kindergarten. Somehow the whole assessment culture should be changed. There should be an understanding of the aims of assessment. Who does the assessment serve? What is the meaning of it? I mean that sometimes when studying I

#### **Group tuition:**

Having to stay in one place always causes more workload than doing some kind of written assignment or other kind of project work in another place that you can choose by yourself. Compulsory attendance is understandable in smaller groups. But contact teaching is sometimes very hard if the amounts of non-attendance are strict. Unfortunately, many students have to work, for both their prestige and CV, for their artistic career or to earn extra income, although working is not recommended whilst studying.

#### **Student feedback:**

And the thing is that sometimes people, well very often people choose to not do that [give feedback], to not cause any problems. The thing is the music world is how it is, everyone knows everyone and people don't wanna [make problems]. Because that can affect their career a lot. I really don't know, obviously the solution is anonymity but,

(Continued)

Table 2. Continued.

Determinants of experienced workload in relation to environmental factors		
General framework of music students' workload		
	have felt, especially when I was younger, that you did the work for the institution or for your teacher or something like that. You did not understand that the meaning is to work for yourself.	anonymity is also not 100%. You still have to have that one person you tell it to. So I don't really know, what would be the solution here, maybe people could be more courageous but ...
Psychological and physiological issues in studying music		
<b>Stress:</b> My reaction to stress has involved a decrease in activity and an inability to plan things when there have been several demanding things to study or exams at the same time. I have experienced that speaking with teachers or student peers helps me. In a serious stressful situation my self-image as a student suffers or, in the worst case, I doubt myself as a musician. However, I have understood that these are normal feelings with stress. Yet, I think there should be a more open and accepting atmosphere in the school to discuss these kinds of difficulties too.	<b>Burnout:</b> So, I must work to get funding for living and studying. I don't have much leisure time and recovering [from stress when combining studying and working] is not always easy, thus, it negatively impacts on my studying. In addition, I have experienced burnout in my current studies and gone through three years' psychotherapy. Naturally, this has affected how I have coped throughout all of my studies. I think that the main reasons for the need for therapy are primarily in my childhood and youth and also my previous experiences in studying music. Strict values in the music industry have caused workload for me (competition, issues with university studying affecting too much to my own identity and so on).	<b>Performance anxiety:</b> But even the best players, the great musicians, they always, every one of them had performance stress when they were students. But after all, I think it's quite good in my college, you do so many performances that after two years going on stage becomes quite normal. Unfortunately the stress is something you have to learn how to handle, because if you plan to perform as a job, it is the same for everyone. Even for the best.
<b>Musculoskeletal problems:</b> At least those friends who have had more serious problems and who have not been able to play their instruments, have been supported by the school to get help. I think that our school even provides one free session with a specialised physiotherapist. So there is good guidance. And there are even courses for the first year students in induction week. I think that this issue [musculoskeletal problems] is very well taken care of here.	<b>Sport and exercise:</b> Sometimes, absolutely, in particular exam concerts and those kinds of events [impact on this]. And entrance exams in which I have participated. They cause sleeplessness at night. And nervousness. Thank God I have sports that I can do. It has been the obvious way for me to relieve those feelings, in every case.	<b>Health:</b> I think it is easy and, I would say, many many students go there [student counsellor]. So, probably every one of my friends has been there. I think it is that kind of thing where there is no stigma anymore. So it is very normal nowadays. Also, my friends studying in other schools or in other universities have sought help. But of course, here in a music university the issues are very often related to music or playing. Or maybe those kinds of problems are just related to music, or but they may be larger ones [than in other disciplines].



### ***Music students' workload whilst studying***

When listening to participants' experiences, several factors could be highlighted as further predictors of the impact of music students' workload whilst studying: (1) approaches to learning when the curriculum and timetable in relation to a programme of study are overloaded, (2) the competitive atmosphere of the neoliberal university, its ideal world composed of individuals skilled in multi-tasking and its lack of collegiality, in comparison to advocating realistic possibilities for coping with studies, (3) time management in studying music which includes many additional commitments, such as rehearsals and gigs, compared to other disciplines in higher education, (4) experiences during the first year of study which can be a traumatic transition phase in a music student's life, (5) challenges connected with practising, such as practise room reservations and scheduling rehearsals for ensembles, (6) flow experiences, indicating positively-experienced workload, (7) the meaning of professional musicianship, and this form of study as a unique and holistic experience for music students, (8) enjoyment arising from playing both alone and with other performers, and (9) religion, especially nowadays when universities are multicultural learning environments including students with diverse religious backgrounds, as a way to find the tools and community to help students to cope with stressful periods.

### ***Music students' workload relating to teaching and learning environments***

The following factors arose from participants' experiences reported in the current study as possible predictors affecting music students' workload relating to teaching and learning environments: (1) how the course, which helps music students to develop their time management skills, could impact on music students' experienced workload, (2) the unique and sometimes challenging relationship between a music student and their one-to-one instrumental or singing teacher, (3) compulsory courses (academic studies and some group tuition) with strict regulations for permissible amounts of non-attendance, (4) unpredictable and sometimes very intense workload in the curriculum, (5) meaningless versus meaningful ways to utilise assessment, and (6) university culture and the nature of behaviours in the music profession hindering music students from giving honest feedback, as students may be afraid of jeopardising their future careers.

### ***Psychological and physiological issues in studying music***

Participants' experiences of stress emphasise that this may have serious consequences on their ability to study and may even impact on their self-image as students and musicians. With some of the students stress has led to burnout. As further predictors of psychological and physiological issues in studying music, participants in our study pointed out following considerations: (1) performance anxiety as a particular factor in studying music, (2) university support for music students' musculoskeletal problems, (3) the positive impact of active and regular exercise on decreasing music students' experienced stress, and (4) the fact that most music students need help from a student counsellor or a longer period of intensive therapy at some stage in their university studies.

## **Discussion**

Music students' experiences of workload and stress in higher education can include many different factors. In this study we defined the aspects as being specific environmental factors and looked into them from the point of view of a student's country in connection with their livelihoods with work, funding and loans. Indeed, we extended the students' livelihoods to also include socio-demographics, such as gender, university level of their programme of studies and music genre studied.

Mixed method synthesis as an integration of the models based on quantitative results, and suggestions for further development of the model based on qualitative findings provided evidence for the third research question to further the development of Bayesian models and pave the way for developmental work in music higher education institutions. The results of this study indicate that, when connected to these characteristics of livelihoods, a student's country of study has an

effect on a student's experienced stress, but not on the experienced main subject workload. However, the experienced main subject workload was the strongest predictor of music students' experienced stress in this study. The findings in relation to music students' lived experiences emphasise that a multifaceted approach is needed to understand the many nuances impacting both their workload and stress whilst studying music at university level.

When looking at the results of general framework (or structure of studies) impacting music students' workload in higher education, livelihoods – understood in their everyday meaning as working and earning resources for living – influences workload and stress. Results in this study indicate that a larger amount of total working hours increases experienced stress but does not affect experiences of main subject workload. Work related to music influences music students' workload, but it does not cause stress to students. Work not related to music has an increased effect on both workload and stress. Full funding seems to have a greater effect on main subject workload – maybe allowing music students to put all their efforts into studying – than partial funding or no funding at all. Funding has no influence on stress. Similarly, having or not having a loan has no effect on workload or stress. It might be that once students have resolved the resources for studying at the beginning of their university studies, they can put this concern to one side until it is time to start to pay back the debts. Research by Beban and Trueman (2018) indicates similar challenges when students navigate between the requirements from a neoliberal university and work. Music students' lived experiences indicate that gap between well-off students compared to low-income students, pressure within the field of music, idealisation of talented musicians, competition, impact of social media and unique characteristics of music students' cohort can be considered as further predictors of the impact of the general framework of music students' workload.

The results show that there is variation in music students' experiences of main subject workload between the United Kingdom and Finland. When looking at the effects, music students in the United Kingdom report that they must work hard with their main subject studies (or 'principal studies' in some institutions). In comparison, music students in Finland find that their main subject studies overload them and this part of their programme does not work well with the overall workload. In addition, their experiences indicate that the amount of credits is not right compared to overall course workload and the pace of study is too intense within the study programme. It is one of the most important developmental aspects of any curriculum that workload is equivalent to the required amount and quality of work, in order to support students' learning in a meaningful way (Bernhard 2010). When listening to participants' experiences, approaches to learning, competitive atmosphere, time management, experiences during the first year of study, practising, flow experiences, the meaning of professional musicianship, enjoyment and religion could be highlighted as further predictors of the impact of music students' workload whilst studying.

Regarding teaching and learning environments, results suggest that university level of study and the music genre studied only have a small effect on music students' experienced main subject workload. Undergraduate students report experiencing a greater workload but less stress than postgraduate students and junior or doctoral students in both countries. Junior and doctoral levels seem to be associated with stressful studying which may be connected with the fact that junior students study music alongside high school and doctoral students alongside working and family commitments. Students studying music education – when combining multiple requirements including playing instruments, practising and studying the teaching profession – are more likely to experience a high level of workload than students studying classical music or other genres but, surprisingly, none of these groupings had an effect on experienced stress. Previous research on student workload suggests – and actually already suggested this 50 years ago – that for developing the best possible teaching and learning environments, student workload problems should be discussed from many angles, such as including perspectives relating to the curriculum, assessment, student capacity and support services for students (Clift and Thomas 1973; Giles 2009). Time management course, relationship with teachers, compulsory

courses, curriculum, assessment and student feedback arose from participants' experiences as possible predictors affecting music students' workload relating to teaching and learning environments.

For music students in higher education, particular psychological and physiological issues are connected to their studies. Results in this study suggest that music students' experienced stress is a stronger predictor of the workload involved in studying their main subject than their livelihood. Female students are more likely to experience significant workload in relation to their main subject and stress, than male or non-binary gender students. This resonates with similar findings by Zetterberg et al. (1998) who reported the issue regarding greater stress levels in female music students 20 years ago, which may indicate that this issue has not been sufficiently taken care at institutional levels. Further consideration is needed to understand possible relations between minority groups and experienced workload and stress, as results indicate that non-binary gender is associated with a negligible effect on main subject workload but a noticeable effect on stress. It is crucial that universities organise adequate and appropriate support systems for music students to develop their coping strategies, in light of the particular issues associated with studying music (Papageorgi et al. 2010a, 2010b). As further predictors of psychological and physiological issues in studying music, participants pointed out performance anxiety, musculoskeletal problems, active and regular exercise and help from a student counsellor or therapy.

### **Limitations**

We consider that certain limitations in our study should be addressed. Results of the study should be generalised to other music students' cohorts with caution because study limitations include the use of single item measure of feeling stress, as well as the use of self-reported experiences by music students. Extending the statistical representativeness of sample sizes in both countries would increase the generalisability of the observed effects. Because our empirical data was collected in two countries, results and findings cannot be generalised outside of those countries. Thus, further research is needed involving additional countries in order to provide results for wider utilisation in higher education music institutions. The second limitation is that it is not possible to make causal conclusions with our correlational research design. Future research could be designed as a Bayesian evaluation of music students' behaviour changes to provide evidence on the impacts of interventions in relation to experienced workload (in line with Heino, Vuorre, and Hankonen 2018). In addition, more research is needed to examine multicultural factors impacting on music students' experiences of workload and stress in higher education, for example research focussing on exchange and international students who have studied in more than one university, and equality issues, for example experiences of minority groups.

### **Implications**

Our study has multiple implications. We employed a model for the current research process which utilises students' experiences in a beneficial way; the experiences serve as research data aimed at producing robust evidence for developmental work which could be undertaken at universities to better support students. In the context of music universities where the study programmes are quite small, a Bayesian approach is a good option because it can produce valid results for small samples and combine both quantitative and qualitative feedback from students (Low-Choy, Riley, and Alston-Knox 2017). Our study, for which the country of study and music students' livelihoods were combined as results predictors, suggests that a neoliberal university culture with high tuition fees which impacts students' livelihoods alongside studying is likely to increase music students' experienced stress, but not directly impact on the workload associated with their main subject of study. However, experienced stress has a great effect on students' experiences of the workload involved with their main subject. To counter and eliminate the negative impact of neoliberalism on students' well-being whilst studying, there is an urgent

need for interventions which utilise research on music students' health (Ginsborg et al. 2009; Williamon and Thompson 2006) in connection with possible alternative courses of action, such as changing competition within an institution to co-operation (Fernández-Herrería and Martínez-Rodríguez 2016; Fitzpatrick 2019) and revising the purposes and contents of study programmes with reference to diverse sources of knowledge (Cannella and Koro-Ljungberg 2017). In this study, we listened to music students' experiences and showed how their valuable voices can contribute to a wide spectrum of knowledge, and become a form of research-based evidence which could potentially be utilised in furthering both the development of university cultures and educational policies.

## Conclusions

The results and findings presented in this study increase the understanding of the predictors of music students' experienced workload, and how they are connected to livelihoods and stress in higher education. We provided an example of a Bayesian ordinal probit regression modelling process and showed how the students' experiences can be analysed in a way which may offer useful evidence for future developmental work in universities and in relation to educational policies. Music students do experience significant workload and stress in higher education, and with regards to their livelihoods, especially when working whilst studying, which does have an impact on their workload and stress. Combining working and studying may increase stress and affect music students' relationship with studying and being a musician, while at the same time it may be beneficial and invaluable for their future careers (e.g. López-Iñiguez and Bennett 2020, *in press*). In curriculum development in music universities there is also a need to pay attention to particular university levels of study, regarding workload (especially with undergraduate-level students), to stress (especially regarding junior- and doctoral-level study), and to particular areas of study, especially music education, in order to be able to make informed adjustments to the course requirements, modules and schedules. Further research is needed to find out the reasons for stress amongst female and non-binary gender students to be able to better support them as music students and musicians in higher education. Because our results indicate that country of study has an effect on the variation between different aspects of music students' experienced main subject workload and on experienced stress, it is important to produce more research-based evidence on students' experiences in connection with specific learning cultures and country-specific educational policies, for example concentrating on university music students' workload in Finland and stress in the United Kingdom. Results and findings of this study can also be used to critically examine how a neoliberal university culture may impact not only on music students' learning, well-being and future careers as musicians but also on the work atmosphere, sense of collegiality and collaboration in academia and the field of music more generally.

## Notes

1. The United Kingdom is a sovereign country, or state, which is comprised of four separate countries. For the purposes of the current discussion, the term 'country' will be used to refer to both Finland and the United Kingdom.
2. 'Junior' students are those who are in secondary school education (pre-higher education), but are attending a course of study at a higher education institution alongside their school studies (usually at weekends). These students are 18 years of age or younger, and study in the same higher education music environment as those pursuing degree study. They are taught by the same tutors as those who teach on degree courses, and are exposed to many of the same environmental factors as those studying for higher education qualifications. The experience of these 'junior' students is therefore considered relevant and important for the current study.

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## Data availability statement

The datasets generated for this study are available on request from the corresponding author.

## Ethics statement

The studies involving human participants were reviewed and approved by the University of the Arts Helsinki Finland Research Ethics Committee and Conservatoires United Kingdom Research Ethics Committee. All participants provided their written informed consent to participate in this study.

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## References

- Bartleet, Brydie-Leigh, Christina Ballico, Dawn Bennett, Ruth Bridgstock, Paul Draper, Vanessa Tomlinson, and Scott Harrison. 2019. "Building Sustainable Portfolio Careers in Music: Insights and Implications for Higher Education." *Music Education Research* 21 (3): 282–294.
- Beban, Alice, and Nicolette Trueman. 2018. "Student Workers: The Unequal Load of Paid and Unpaid Work in the Neoliberal University." *New Zealand Sociology* 33 (2): 99–131.
- Bergkvist, Lars, and John R. Rossiter. 2007. "The Predictive Validity of Multiple-Item Versus Single-Item Measures of the Same Constructs." *Journal of Marketing Research* 44 (2): 175–184.
- Bernhard, H. Christian. 2007a. "A Comparison of Burnout Between Undergraduate Music and Non-Music Majors." *Visions of Research in Music Education* 9/10: 1–13.
- Bernhard, H. Christian. 2007b. "A Survey of Burnout Among College Music Majors." *College Student Journal* 41 (2): 392–402.
- Bernhard, H. Christian. 2010. "A Survey of Burnout Among College Music Majors: A Replication." *Special Issue Music and Health* 3 (1): 31–41.
- Bürkner, Paul-Christian, and Matti Vuorre. 2019. "Ordinal Regression Models in Psychology: A Tutorial." *Advances in Methods and Practices in Psychological Science* 2 (1): 77–101.
- Cannella, Gaile S., and Mirka Koro-Ljungberg. 2017. "Neoliberalism in Higher Education: Can We Understand? Can We Resist and Survive? Can We Become Without Neoliberalism?" *Cultural Studies* 31 (3): 155–162.
- Clift, John C., and Ian D. Thomas. 1973. "Student Work Loads." *Higher Education* 2 (4): 447–460.
- Fanghanel, Joelle. 2012. *Being an Academic*. London & New York: Routledge.
- Fernández-Herrería, Alfonso, and Francisco Miguel Martínez-Rodríguez. 2016. "Deconstructing the Neoliberal 'Entrepreneurial Self': A Critical Perspective Derived from a Global 'Biophilic Consciousness'." *Policy Futures in Education* 14 (3): 314–326.
- Fitzpatrick, Kathleen. 2019. *Generous Thinking: A Radical Approach to Saving the University*. Baltimore: Johns Hopkins University Press.
- Fosnacht, Kevin, Simon Sarraf, Elijah Howe, and Leah K. Peck. 2017. "How Important Are High Response Rates for College Surveys?" *The Review of Higher Education* 40 (2): 245–265.
- Freed, Larry. 2013. *Innovating Analytics: How the Next Generation of Net Promoter Can Increase Sales and Drive Business Results*. New Jersey: John Wiley & Sons.
- Giles, Laraine. 2009. "An Investigation of the Relationship Between Students' Perceptions of Workload and Their Approaches to Learning at a Regional Polytechnic". PhD diss., Massey University, Palmerston North, New Zealand.
- Ginsborg, Jane, Gunter Kreutz, Mike Thomas, and Aaron Williamon. 2009. "Healthy Behaviours in Music and Non-Music Performance Students." *Health Education* 109 (3): 242–258.
- Guckian, Meaghan L., Daniel Chapman, Brian Lickel, and Ezra Markowitz. 2020. "From Absolution to Action: Examining Americans' Reactions to High-Profile Corporate Scandals." *Analyses of Social Issues and Public Policy*. Advance Online Publication. doi:10.1111/asap.12196
- Gyamera, Gifty Oforiwa, and Penny Jane Burke. 2018. "Neoliberalism and Curriculum in Higher Education: A Post-Colonial Analyses." *Teaching in Higher Education* 23 (4): 450–467.
- Hamann, Donald L., and Elza Daugherty. 1985. "Burnout Assessment: The University Music Student." *Update: Applications of Research in Music Education* 3 (2): 3–8.
- Heino, Matti T. J., Matti Vuorre, and Nelli Hankonen. 2018. "Bayesian Evaluation of Behavior Change Interventions: A Brief Introduction and a Practical Example." *Health Psychology and Behavioral Medicine* 6 (1): 49–78.
- Hesse-Biber, Sharlene Nagy. 2015. "Introduction: Navigating a Turbulent Research Landscape: Working the Boundaries, Tensions, Diversity, and Contradictions of Multimethod and Mixed Methods Inquiry." In *The Oxford Handbook for Multimethod and Mixed Methods Research Inquiry*, edited by Sharlene Nagy Hesse-Biber, and R. Burke Johnson, xxxiii–xxliii. Oxford: Oxford University Press.
- Ivanova, Nataliya V., John W. Creswell, and Sheldon L. Stick. 2006. "Using Mixed-Methods Sequential Explanatory Design: From Theory to Practice." *Field Methods* 18 (1): 3–20.
- Jääskeläinen, Tuula. 2016. "Tavoitteena opetuksen kehittämistä tukevan luotettavan tutkimustiedon tuottaminen Sibelius-Akatemiassa – tapausesimerkinä opiskelijoiden kokeman kuormittavuuden pilottitutkimus. [Aiming to Produce Reliable Research Findings for Supporting Development of Teaching in the Sibelius Academy –



- Pilot Study in Students' Experiences of Work Load as a Case Example]." *Finnish Journal of Music Education* 19 (1): 60–67.
- Jääskeläinen, Tuula. 2020a. "Tuition Fees, Entrance Examinations and Misconceptions about Equity in Higher Music Education." Manuscript submitted for publication.
- Jääskeläinen, Tuula. 2020b. "Music Students' Experienced Workload in Higher Education and Meaning of Musicianship: A Transcendental Phenomenology Study." Manuscript submitted for publication.
- Jääskeläinen, Tuula, and Guadalupe López-Íñiguez. 2020. "A Teacher's Tools to Support a Music Student's Workload in Higher Education." Manuscript in progress.
- Jääskeläinen, Tuula, Guadalupe López-Íñiguez, and Kai Lehtikainen. 2020. "Experienced Workload, Stress and Coping Among Music Students in Higher Education: A Mixed Method Study." Manuscript in progress.
- Jääskeläinen, Tuula, Guadalupe López-Íñiguez, and Michelle Phillips. 2020. "Music Students' Experienced Workload in Higher Education: A Systematic Review and Recommendations for Interventions." Manuscript submitted for publication.
- Johnston, Jessica. 2011. "Interrogating the Goals of Work-Integrated Learning: Neoliberal Agendas and Critical Pedagogy." *Asia-Pacific Journal of Cooperative Education* 12 (3): 175–182.
- Karlsen, Sidsel. 2019. "Competency Nomads, Resilience and Agency: Music Education (Activism) in a Time of Neoliberalism." *Music Education Research* 21 (2): 185–196.
- Kember, David. 2004. "Interpreting Student Workload and the Factors Which Shape Students' Perceptions of Their Workload." *Studies in Higher Education* 29 (2): 165–184.
- Leahy, Catherine M., Ray F. Peterson, Ian G. Wilson, Jonathan W. Newbury, Anne L. Tonkin, and Deborah Turnbull. 2010. "Distress Levels and Self-Reported Treatment Rates for Medicine, Law, Psychology and Mechanical Engineering Tertiary Students: Cross-Sectional Study." *Australian & New Zealand Journal of Psychiatry* 44 (7): 608–615.
- Lewis, Magda. 2005. "More Than Meets the Eye: The Under Side of the Corporate Culture of Higher Education and Possibilities for a New Feminist Critique." *Journal of Curriculum Theorizing* 21 (1): 7–25.
- López-Íñiguez, Guadalupe, and Dawn Bennett. 2020. "A Lifespan Perspective on Multi-Professional Musicians: Does Music Education Prepare Classical Musicians for Their Careers?" *Music Education Research* 22 (1): 1–14. doi:10.1080/14613808.2019.1703925.
- López-Íñiguez, Guadalupe, and Dawn Bennett. in press. "Broadening Student Musicians' Career Horizons: The Importance of Being and Becoming a Learner in Higher Education." *International Journal of Music Education*.
- Low-Choy, Samantha, Tasha Riley, and Clair Alston-Knox. 2017. "Using Bayesian Statistical Modelling as a Bridge Between Quantitative and Qualitative Analyses: Illustrated via Analysis of an Online Teaching Tool." *Educational Media International* 54 (4): 317–359.
- Lund, Rebecca. 2020. "The Social Organisation of Boasting in the Neoliberal University." *Gender and Education* 32 (4): 466–485.
- Maisuria, Alpesh. 2014. "The Neo-Liberalisation Policy Agenda and Its Consequences for Education in England: A Focus on Resistance Now and Possibilities for the Future." *Policy Futures in Education* 12 (2): 286–296.
- Mitchell, Joanne. 2020. "Juggling Employment and Studies: Nursing Students' Perceptions of the Influence of Paid Employment on Their Success." *Nurse Education Today* 92: 104429. Advance Online Publication. doi:10.1016/j.nedt.2020.104429
- Moustakas, Clark E. 1994. *Phenomenological Research Methods*. Thousand Oaks, CA: Sage.
- Oksanen, Airi, Katri Laimi, Katja Björklund, Eliisa Löytyniemi, and Kristina Kunttu. 2017. "A 12-Year Trend of Psychological Distress: National Study of Finnish University Students." *Central European Journal of Public Health* 25 (2): 113–119.
- Papageorgi, Ioulia, Elizabeth Haddon, Andrea Creech, Frances Morton, Christophe De Bezenac, Evangelos Himonides, John Potter, Celia Duffy, Tony Whyton, and Graham Welch. 2010a. "Institutional Culture and Learning I: Perceptions of the Learning Environment and Musicians' Attitudes to Learning." *Music Education Research* 12 (2): 151–178.
- Papageorgi, Ioulia, Elizabeth Haddon, Andrea Creech, Frances Morton, Christophe De Bezenac, Evangelos Himonides, John Potter, Celia Duffy, Tony Whyton, and Graham Welch. 2010b. "Institutional Culture and Learning II: Inter-Relationships between Perceptions of the Learning Environment and Undergraduate Musicians' Attitudes to Performance." *Music Education Research* 12 (4): 427–446.
- Parpala, Anna, and Sari Lindblom-Ylänne. 2012. "Using a Research Instrument for Developing Quality at the University." *Quality in Higher Education* 18 (3): 313–328.
- Pekkola, Mika. 2009. "Neoliberal Politics of Innovation and Its Opposition at the University: The Case of Finland." *The International Journal of Inclusive Democracy* 5 (2): 1–8.
- Porter, Stephen R., Michael E. Whitcomb, and William H. Weitzer. 2004. "Multiple Surveys of Students and Survey Fatigue." *New Directions for Institutional Research* 121: 63–73.
- R Core Team 2017. *R: A Language and Environment for Statistical Computing*. Vienna: RFoundation for Statistical Computing.



- Reid, Anna. 2001. "Variation in the Ways that Instrumental and Vocal Students Experience Learning Music." *Music Education Research* 3 (1): 25–40.
- RStudio Team. 2016. *RStudio: Integrated Development Environment for R*. Boston, MA: RStudio.
- Slaughter, Sheila, and G. Gary Rhoades. 2004. *Academic Capitalism: Politics, Policies, and the Entrepreneurial University*. Baltimore: Johns Hopkins University Press.
- Slote, Michael. 2012. *Education and Human Values: Reconciling Talent with an Ethics of Care*. New York: Routledge.
- Thornton, Margaret. 2012. "Universities Upside Down: The Impact of the New Knowledge Economy." In *Reconsidering Knowledge: Feminism and the Academy*, edited by Mex Luxton, and Mary Jane Mossman, 76–95. Halifax: Fernwood.
- Thornton, Margaret. 2016. "Law Student Wellbeing: A Neoliberal Conundrum." *Australian Universities' Review* 58 (2): 42–50.
- Weston, Donna. *in press*. "The Value of 'Soft Skills' in Popular Music Education in Nurturing Musical Livelihoods." *Music Education Research*.
- Williamon, Aaron, and Sam Thompson. 2006. "Awareness and Incidence of Health Problems among Conservatoire Students." *Psychology of Music* 34 (4): 411–430.
- Yahanpath, Noel, and Edgar Burns. 2011. "Undergraduate Students Paid Semester Work and Its Impact on Retention Rate". *NZACE 2011 Conference Proceedings*, edited by Karsten E. Zegwaard, 35–37. New Zealand Association for Cooperative Education.
- Zetterberg, Carl, Helena Backlund, Jenny Karlsson, Helen Werner, and Lars Olsson. 1998. "Musculoskeletal Problems among Male and Female Music Students." *Medical Problems of Performing Artists* 13: 160–166.