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Practice and performance management strategies of emerging professional musicians in preparation for orchestra auditions

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Abstract

Orchestra auditions form a critical career challenge for many aspiring classical musicians. Hence, emerging professional musicians—defined as promising musicians entering the professional circuit without having yet established full-time employment—require effective practice and performance strategies to manage the demands of auditions. The purpose of this collective case study was to gain an in-depth and contextualized understanding of such practice and performance management strategies in relation to mock orchestra auditions. Data were collected using an intensive qualitative approach, combining semi-structured interviews with regular structured monitoring interviews, with eight musicians. Content analysis revealed that participants, on average, engaged in 33 hr of music-related activities per week, during which they adopted self-regulating strategies (i.e., strategic goal setting, structuring practice, monitoring practice, and reflecting on progress) to a varying degree. Furthermore, participants used different performance management strategies to cope with the pressure of auditions (i.e., practicing under pressure, imagery, relaxation, cognitive reframing, routines, attentional control, and substance use). Overall, the data suggest that the emerging musicians possessed several different practice and performance strategies but showed great variation in the use of such strategies and had a

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preference for long practice hours. Potential implications for music education organizations aiming to prepare students for auditions are discussed.

Keywords
deliberate practice, music performance anxiety, orchestra auditions, performance preparation, self-regulated learning

Orchestra auditions form a critical career transition for many aspiring professional classical musicians. They are distinguished from other performance settings by a number of specific stress factors, such as direct competition with other musicians, the solo performance setting, and the potentially considerable long-term consequences associated with performing well (Cox & Kenardy, 1993; Roland, 1994). Indeed, auditions may present one of the most stressful performance settings throughout a musician's career (Kenny et al., 2014; van Kemenade et al., 1995). Increases in music performance anxiety (MPA) during such critical performances can, in turn, have detrimental effects on musicians' attentional focus and performance (Buma et al. 2015; Kenny, 2011; van Kemenade et al., 1995; Wan & Huon, 2005). Emerging professional musicians—defined as promising musicians entering the professional circuit without having yet established full-time employment (Throsby & Zednik, 2011)—therefore require effective practice and performance management strategies to successfully deal with the demands of auditions.

One common strategy to prepare for demanding performances, including auditions, maybe to increase practice time and intensity (Kenny et al., 2014; Roland, 1994). However, simply increasing the quantity of practice is not always sufficient to predict music performance (Bonneville-Roussy & Bouffard, 2015; Williamon & Valentine, 2000). Several authors found that music students often focus on "making hours" (Burwell & Shipton, 2013; Pecen et al., 2018) rather than demonstrating effective, goal-directed practice (Dos Santos & Gerling, 2011; McPherson et al., 2019; Mornell et al., 2020). In contrast, the content and quality of musicians' practice may be more important than mere practice time in determining music performance outcomes (Bonneville-Roussy & Bouffard, 2015; Chaffin & Imreh, 2001; Williamon & Valentine, 2000).

Regarding the quality of practice, Ericsson et al. (1993) argued that music performance is best predicted by *deliberate practice*, which refers to highly structured and goal-directed individual practice activities with the specific aim to improve on a well-defined task, executed with maximum effort and concentration (Ericsson et al., 1993; Ericsson & Harwell, 2019). Moreover, the quality of the deliberate practice is related to musicians' ability to self-regulate their own learning (Bonneville-Roussy & Bouffard, 2015; Hatfield et al., 2017). Such *self-regulated learning* (SRL) refers to a proactive approach whereby musicians are metacognitively, motivationally, and behaviorally involved in planning, monitoring, and evaluating their own learning process (McPherson & Zimmerman, 2002; Zimmerman, 2002). Evidence suggests that accomplished musicians—compared with less accomplished musicians or students—typically engage in more of these deliberate practice and SRL strategies (Bonneville-Roussy & Bouffard, 2015; Hallam et al., 2021; Hatfield et al., 2017). Hence, it might be expected that these are equally crucial to prepare for orchestra auditions.

As Clark et al. (2014) highlighted, performances do not occur in a vacuum. In addition to high-quality practice behaviors, musicians require performance management strategies to prepare for and cope with the demands of orchestra auditions and perform under pressure.

Music performance psychology has an established tradition of implementing and evaluating performance management strategies—often derived from sports—to help musicians prepare for high-pressure performances (e.g., Greene, 2012; Osborne et al., 2014; Spahn et al., 2016). In the absence of such structural interventions though, musicians often develop their own idiosyncratic performance management strategies (Huang & Song, 2021; Roland, 1994). For example, musicians can use a combination of cognitive strategies, such as imagery, self-talk, or attentional control, and behavioral strategies, such as relaxation, practicing under pressure, or—more maladaptively—substance use (e.g., DeSantis et al., 2021; Huang & Song, 2021; Kenny et al., 2014; Pecen et al., 2018). Such performance management strategies include long-term and short-term strategies to deal with acute performance demands and MPA (Huang & Song, 2021; Roland, 1994). Overall, Pecen et al. (2018) found that accomplished musicians more frequently use complex adaptive performance management strategies (e.g., attentional control and emotional regulation) compared with less accomplished musicians. Yet limited information is available on the use of such strategies by emerging musicians in relation to orchestra auditions.

Music performance research has predominantly focused on music students or established professional musicians while emerging professional musicians remain far less represented. Emerging musicians form a distinct population of interest as they distinguish themselves from music students in terms of knowledge and skill level (Pecen et al., 2018, p. 3) while not yet having the experience and skill level of established professional musicians. Like more established musicians, they face specific career challenges when trying to transition into the professional field, including increased time constraints, managing finances, and competing for work (MacNamara et al., 2008). As such, orchestra auditions form a particularly salient career challenge for these emerging musicians. From a music education perspective, examining the practice and performance management strategies used in relation to auditions may provide insights into the knowledge and skills needed to reach this level of expertise as well as highlighting specific avenues for improvement to help students successfully make the transition to the professional field.

Given these points, the purpose of this exploratory study was to gain an in-depth understanding of the practice and performance management strategies used by emerging professional musicians in relation to orchestra auditions. More specifically, we were interested in how participants shape the content of their practice as well as the long- and short-term strategies they use to manage audition demands. To contextualize these adopted strategies, we were also interested in the quantity of practice participants engage in prior auditions. Hence, the following research questions were formulated for this study: (1) for how many hours do participants engage in different music-related activities prior to auditions (i.e., quantity of practice), (2) how do they shape the content of their practice activities (i.e., quality of practice), and (3) which performance management strategies do they use in preparation for and during auditions?

Method

This study was set up as an instrumental collective case study (Stake, 1995), situated within the academy of a world-renowned symphonic orchestra (i.e., typically considered a Top 5 orchestra in popular polls). Such an approach is particularly suited to gaining a detailed understanding of complex phenomena within their relevant contexts (Stake, 1995; Yin, 2003). To this end, we used an intensive multimethod qualitative research approach (Yin, 2003), whereby semi-structured interviews were complemented with regular structured monitoring interviews.

Table 1. Mean Hours of Practice Per Week and Relevance for Audition Preparation Per Type of Practice.

Music-related activities	Mean hours/ week (*SD*)	Percentage (%)	Relevance for audition preparation (*SD*)
Practicing individually, WITHOUT a teacher	16.2 (6.4)	47.0	8.5 (1.9)
Practicing individually, WITH a teacher	1.6 (1.2)	5.0	8.4 (3.0)
Practicing in a group, WITHOUT a teacher/ conductor	2.1 (2.0)	6.1	1.3 (0.8)
Practicing in group, WITH a teacher/conductor	5.9 (5.0)	19.4	2.1 (1.8)
Performing	2.5 (3.0)	7.9	3.4 (2.7)
Teaching others	0.0 (0.0)	0.0	–
Physical exercise	1.2 (1.4)	3.0	6.0 (2.4)
Mental training	0.6 (0.7)	1.9	6.5 (3.1)
Score analysis	1.0 (1.0)	3.2	6.4 (3.7)
Reading professional literature	0.1 (0.2)	0.2	1.5 (0.7)
Playing for fun alone	0.2 (0.2)	0.5	3.2 (2.2)
Playing for fun in a group	0.0 (0.0)	0.0	–
Listening to music	1.5 (1.5)	5.2	6.5 (3.5)
Total	**33.0 (8.1)**	**100**	–

SD: standard deviation.

Setting

The orchestra academy provides eight talented young musicians the opportunity to work embedded within the organization and collaborate in orchestra productions for a duration of 1 year. Musicians are selected based on highly competitive international auditions. The academy members were considered suitable cases for this study as (a) they are successful (former) music students who are mentored toward the professional circuit and can, thus, be considered emerging musicians, and (b) they had already demonstrated some success in preparing for auditions, given their admittance to the academy. In addition, the academy was selected as an appropriate case environment because it organized yearly mock auditions as part of the members' professional development. These mock auditions served to prepare academy members for actual high-level orchestra auditions and were designed to simulate real-life auditions as closely as possible. Musicians were required to master one full orchestra part, as well as a set of challenging (new) excerpts, within a limited time frame (28 days). The auditions consisted of two rounds (one "blind") and were evaluated by a jury of international orchestra members. Although the mock auditions may not have reached complete representativeness (e.g., no orchestra position was on the line), they were conducted according to actual standards and, thus, provided a valuable setting to examine emerging musicians' real-life practice and performance management strategies.

Participants

All eight musicians (one male and seven females) enrolled within the academy agreed to participate ($M_{age} = 23.75$; $SD = 1.39$). Instruments played included violin ($n = 3$), viola, cello, double bass, harp, and clarinet (all $n = 1$). Two participants were still enrolled in a conservatorium master's program. All other participants had previously obtained a bachelor's or Master's degree and were no longer enrolled in music education.

Table 2. Overview of the Adopted Practice and Performance Management Strategies.

Higher-order concept	Categories	Subcategories
Quality of practice	Strategic goal setting (8; 87)	Long term goals (7; 26)
		Short term—generic practice goals (8; 33)
		Short term—specific practice goals (6; 15)
		Short term—no practice goals (6; 13)
	Structuring practice (8; 38)	Continuous practice blocks > 60 min (7; 15)
		Continuous practice blocks < 60 min (4; 8)
		Importance of breaks (6; 10)
		Continuing practice without focus (4; 5)
	Monitoring practice (7; 50)	Use of metronome (6; 24)
		Audio- and video recordings (6; 24)
		No explicit monitoring (1; 2)
	Reflecting on progress (4; 7)	Reflect on current practice goals (3; 4)
		Reflect on future practice goals (2; 3)
Performance management strategies	Practicing under pressure (7; 33)	Informal try-outs (7; 15)
		Formal try-outs (6; 10)
		Physical exertion (1; 2)
		Manipulating musical demands (2; 6)
	Imagery (6; 22)	Mental representation of audition context (6; 18)
		Mental representation of technical execution (2; 4)
	Relaxation (8; 33)	Breathing exercises (6; 12)
		Physical relaxation (6; 13)
		Use distractions (5; 8)
	Cognitive reframing (6; 15)	Positive self-talk (4; 11)
		Focus on thoughts that give confidence (3; 3)
		Talking about performance anxiety (1; 1)
	Routines (5; 20)	Pre-performance routines (3; 6)
		Performance routines (2; 5)
		Taking your time on stage (4; 9)
	Attentional control (7; 29)	Focus on technique (7; 22)
		Focus on physical aspects (4; 7)
	Substance use (2; 2)	Use of beta-blockers (2; 2)

The first number between brackets represents the number of participants mentioning the (sub)category, and the second number represents the total number of quotes within the (sub)category.

Procedure

After receiving institutional ethical approval and participants' informed consent, an initial individual semi-structured interview (*Interview 1*) was planned with each participant. Following these interviews, participants received their audition material 28 days before the mock auditions. During these 28 days, semi-weekly structured monitoring interviews were planned to track the participants' progress, except for during the final week before the audition when only a single interview was planned. Due to practical reasons and scheduling conflicts (e.g., international concerts), not all monitoring interviews could take place. In total, 37 monitoring interviews were conducted, with a minimum of four per participant. The auditions themselves were organized on two separate days (Day 1 $n = 5$; Day 2 $n = 3$). Within 1 week after the audition, final individual semi-structured interviews (*Interview 2*) were conducted.

Data collection

Semi-structured interviews. Semi-structured interviews were used to gather in-depth information about the participants' general practice and performance management strategies. An interview guide was developed for *Interview 1*, addressing the three main research questions: quantity of practice (e.g., "How many hours do you typically spend practicing per day?"), quality of practice (e.g., "Which strategies do you use to master a new piece of music?"), and performance management strategies (e.g., "To what extent do you experience stress before or during an audition?"; "How do you prepare yourself for the stress of an audition?"). *Interview 2* addressed the same topics but directed toward the specific experiences and strategies used prior to and during the actual audition. The interviews were audio-recorded and transcribed verbatim (including pauses and filler words) to facilitate further analysis.

Monitoring interviews. Short, structured monitoring interviews complemented the semi-structured interviews and were designed to gain more insight into the participants' daily activities. First, participants were asked how many hours they engaged in particular music-related activities during the past week (e.g., Practicing individually, WITHOUT a teacher; see Table 1). Subsequently, participants were asked to give a rating for how relevant these activities were for their audition preparation, ranging from 1 (*not relevant at all*) to 10 (*extremely relevant*). Finally, participants were asked a number of open-ended questions related to their practice activities (e.g., "Did you have a specific goal in mind before practicing? If yes, which one?"; "How did this activity help you to prepare for the upcoming audition?"). The responses were all noted down in monitoring logs for further analysis.

Data analysis

Data were analyzed using content analysis, which allows for a systematic, broad, and coherent description of the participants' adopted behavior (Elo & Kyngä, 2007; Hsieh & Shannon, 2005). Analysis was based on the written data from the interview transcripts and monitoring logs. The analysis started by immersion in the data (i.e., reading and re-reading) followed by a process of open coding, whereby meaning units (text segments) were given preliminary codes (labels). In line with deductive content analysis (cf. Elo & Kyngä, 2007), codes were subsequently clustered according to our main research questions and divided into *quantity of practice*, *quality of practice*, and *performance management strategies*. Consequently, higher-order concepts were inductively developed based on a process of grouping and abstraction (Elo & Kyngä, 2007). Within this process, codes were condensed into categories and subcategories with similar or related content, which were increasingly grouped together and provided with a content-characteristic label. Subcategories and categories were also summated for each of the given higher-order concepts (Hsieh & Shannon, 2005). Basic descriptive statistics (means, standard deviations, and frequencies) were used for the summated content analysis to determine the total practice time, the relevance of different activities for the audition preparation, and to give an indication of how frequently participants used specific practice or performance management strategies.

A number of strategies were adopted to establish rigor and trustworthiness and reduce bias. First, through the multiple interviews, monitoring sessions, and other interactions, rapport was built between participants and researchers. Such prolonged engagement created a climate in which participants felt safe and comfortable to share their experiences and ensured rich data collection. Second, "critical friends" were used throughout the process of analysis

(Smith & McGannon, 2018). As critical friends, the co-authors had a role in scrutinizing the analysis of the lead researcher and offering potential alternative interpretations of the data. At several points, the analysis was examined as a group and any differences in interpretation were discussed. Third, member reflections were used by presenting the analysis to the participants and inviting them to reflect on the analysis and provide feedback (Smith & McGannon, 2018). No major changes resulted from these member reflections. Finally, in the results section, the analysis is illustrated with tables and authentic quotes to facilitate assessment by the reader (Elo & Kyngä, 2007).

Results

Data from the interviews and monitoring logs were divided into three higher-order concepts: *quantity of practice, quality of practice*, and *performance management strategies*. Summated findings on the quantity of practice, derived from the monitoring interviews, are presented in Table 1. Categories and subcategories relating to the quality of practice and performance management strategies are presented in Table 2. Each higher-order concept is addressed subsequently. Quotes are provided, signposted by the participant's number and "*I*" or "*M*" to indicate their origin (i.e., interviews or monitoring logs, respectively).

Quantity of practice

Drawing on the monitoring data, participants indicated they engaged in various types of activities in the weeks prior to the audition (Table 1). Summing up the duration of all activities demonstrated that, on average, participants engaged in music-related activities for 33 hr per week ($SD = 8.1$; range = 17.5–57). Most time was spent on individual practice without a teacher, which accounted for 47% of the total duration ($M_{hours} = 16.2$; $SD = 6.4$; range = 6.5–26). Considering the perceived relevance of each activity, individual practice *with* and *without* a teacher were rated as the most relevant activities to prepare for the mock audition, with mean ratings of 8.4 and 8.5, respectively (Table 1).

The total number of music-related activities not only related to audition preparation, but also included other academy activities such as chamber music and orchestra rehearsals and performances. Due to these additional activities, almost all participants ($n = 7$) mentioned experiencing significant time constraints, which was believed to limit their ability to adequately prepare for the audition: "I have too little time to bring it to such an [excellent] level" (P1-*M*); "I think the result [of time constraints] was that I was tired all the time and that I did not really increase my skills anymore" (P4-*I*). As highlighted by these quotes, time constraints seemed to impair musicians' confidence in their audition preparation. Interestingly, although all participants expressed a desire for more practice time, some participants also mentioned that the constraints actually helped in developing more efficient practice strategies:

> What I have learned a lot, especially in the past two years, is to be able to practice very focused and in a very short amount of time. Because sometimes I only get one or two hours a day, and then you obviously cannot do as much. But you need to try to get to 90% of what you did with 8 hours in 1 hour. (P3-*I*)

To further illustrate this quote, the following section presents strategies through which the participants shaped the content and quality of their practice.

Quality of practice

Four categories were identified, reflecting the participants' approach to shaping the quality of their practice. Each of these categories is discussed subsequently.

Strategic goal setting. Strategic goal setting was the first important strategy to prepare for the auditions. Seven participants demonstrated that they were strategic and goal-directed in their overall long-term approach to the audition. For example, six participants explicitly reflected on developing their own musical interpretation of the audition pieces, as highlighted by one participant:

> I especially looked at [my own] articulation in the music. Sometimes there are so many general ideas about composers that I think, "OK, but you are not sure if that is really meant like that." And we are also our own artists who can give our own interpretations to music. (P1-*I*)

Seven participants also mentioned that they tried to analyze why particular excerpts were chosen for the audition: "In every part they [the jury] look for something different from you, so you have to think a bit, 'what should I show here and why are they asking for this and not for another thing?'" (P6-*I*). As evidenced by this quote, participants tried to anticipate jury expectations and set their practice goals accordingly. Overall, the accounts of the participants seemed to reflect strategic task analysis and long-term goal setting at the start of the audition preparation process.

Most participants ($n = 6$) argued that such strategic task analysis helped inform daily short-term practice goals. In contrast, summated monitoring data showed that participants could only provide specific goals in a minority of practice sessions. For 54.1% of the sessions, participants only formulated a generic goal, describing *what* to practice without describing *how*: for example, "I will practice my audition stuff first and then chamber music" (P5-*M*). For 22.8% of sessions, participants did not formulate any prior goals: for example, "I am a bit messy, so I just—when I am going to practice—I think what I am going to do" (P6-*M*). For only 26.3% of sessions did participants define a specific goal—typically measurable and time-based—providing guidance for *how* to practice: for example, "I have to improve a certain amount of speed on the metronome" (P7-*M*). Hence, it seemed that despite developing long-term strategic goals, participants had more difficulties translating these long-term goals into daily practice goals.

Structuring practice. The second category is related to the structuring of practice time. Overall, there was much variability in the way participants structured their practice, with blocks varying between 30 min and more than 3 hr. Within these blocks, most participants ($n = 6$) emphasized the importance of breaks to recover both mentally and physically and to maintain practice efficiency. This is illustrated by the following comments: "Anything to just get you out of the music and to do something else for 5 min, and then to come back" (P3-*I*); "[I try] to take enough time to recover physically and of course to escape mentally, really get out of practice" (P7-*I*).

Despite highlighting the importance of breaks, continuous practice blocks of 60 to 120 min were the norm for most participants ($n = 7$), often for practical reasons: "You book a practice room for 1.5 hours and you try to study [the full] 1.5 hours and only then take a break" (P2-*I*); "I like to make it in one hour things because then I can plan my day better" (P3-*I*). In addition, some participants also stated that feeling underprepared and needing to "make enough hours" made them continue practicing, even when they lost focus:

> Sometimes I go on. I really have to practice that day, for example because tomorrow I have a lesson. So I go on practicing. I realize I am not focussed anymore. Because maybe I don't have a good day, or I have some worries. I realize that I'm not focussed at all, but I just say sometimes, "OK, maybe even if I am not focussed it's fine, I can do my best and I can still do something." (P6-*I*)

Despite emphasizing the importance of structuring practice, the actual approach, thus, seemed to depend more on practical concerns and a perceived need to accumulate sufficient practice hours.

Monitoring practice. The participants also described several strategies to monitor the quality of their practice. For example, participants frequently used a metronome to monitor playing tempo ($n = 6$) or used audio or video recordings ($n = 6$). Monitoring was perceived as beneficial for providing feedback on sound, presence, and focus: "It always sounds and looks different than I thought it would. So sometimes I make a little video to make sure that it is like I wanted it to be" (P5-*I*); "[I] see how I look, how it [the performance] looks, because we live in a very visual world nowadays and it's important" (P3-*I*). In contrast, one participant mentioned the perceived disadvantages of monitoring practice, arguing that it may demand too much time and effort and lead to unpleasant feelings and decreased confidence:

> I thought if I am going to record myself right now then I will find myself playing so badly and then I will be totally confused and I will get totally depressed and play very bad after all. So I did not monitor myself consciously, which is a bit bad maybe. (P1-*I*)

Reflecting on progress. Only four participants mentioned that they would reflect explicitly on their practice. For example, one participant described the use of a reflective diary:

> Every night I look at my book and see what I wanted that day. I wanted to practice this and I am like, "OK, I didn't do that today," and I try not to freak out and I put it on the next day. (P8-*I*)

The participants who used such explicit reflection indicated that they would use it to translate their monitored practice into new goals, as illustrated by the following statement: "I kind of make a short plan for tomorrow, like what I need to do next because I see what progress I made today" (P3-*I*). In contrast, the other four participants argued that reflecting and evaluating practice was a matter of "intuition" and "gut feeling" rather than something to be done explicitly: "It's a matter of feeling because you can feel if you have a good practice or not, if you were efficient or not, or you just play to play" (P6-*I*). However, when asked, these participants could not clarify how such intuitive reflections informed their consequent practice goals.

Performance management strategies

Several performance management strategies were also identified. These included (a) practicing under pressure, (b) imagery, (c) relaxation, (d) cognitive reframing, (e) routines, (f) attentional control, and (g) substance use.

Practicing under pressure. Most participants included specific challenges during practice, most commonly entailing try-outs ($n = 7$). These try-outs were attempts to simulate performance conditions by playing for other people, either in informal (i.e., "just playing for some people") or in more formal settings. Such a formal try-out was described by one participant as follows: "I

really try to be in a situation like an audition. To play through, without a break and to be serious and that it's calm in the room and nobody is talking" (P5-*I*). Participants seemed to use try-outs to recreate the nerves of playing in front of other people and to develop the ability and confidence to perform well under those circumstances, as illustrated by the following quotes: "for sure I get a bit nervous during try-outs. Not to the extent of a concert but it is still quite a good simulation" (P3-*I*); "the main purpose [of try-outs] is to get used to playing for people" (P6-*I*). Although try-outs were commonly used, some also used other strategies, including physical strain or manipulating musical demands, to increase pressure during practice. For example, Participant 6 would run up and down the stairs to increase her heart rate, in an attempt to simulate the physical symptoms of anxiety during auditions.

Imagery. Another preparation strategy mentioned by six participants was the use of imagery. This was done primarily to make a mental representation of the audition context: "I try to imagine the room and how it will look where I come in" (P4-*I*); "I was trying to imagine I was behind the curtain and I would play for the jury" (P8-*I*). According to the participants, imagery helped with reducing anxiety and increasing focus: "I have less stress when [using] visualization; because it is kind of like I was already there" (P8-*I*); "[imagery helped me] to be only focussed on the music" (P6-*I*). Notably, not all participants believed imagery was a useful strategy to prepare for their audition. One participant, for example, found limited value in imagery, given the complexity and variability of audition settings: "it [the audition] is always different and you are always nervous. So it's not really helpful to imagine how it could be" (P5-*I*).

Relaxation. Six participants used some type of relaxation, especially right before the audition. Relaxation strategies commonly included basic breathing exercises: "I really feel my heartbeat when I am nervous, so I try to breathe slower and deeper" (P4-*I*); "I try to focus on my breathing. I just mean that you do not have to control your breathing but that you are only aware of it" (P1-*I*). Others also used physical relaxation or actively sought out distractions. Overall, these techniques seemed to aid the participants in coping with both the cognitive and the somatic expressions of MPA, as illustrated by one participant: "Mainly before I go on stage, I breathe a lot, try to calm down your heartbeat. It helps musically, also mentally, you can be more focused on the music, you can control your mind" (P6-*I*).

Cognitive reframing. Participants also described coping with MPA in a cognitive manner, by attempting to control and reframe their thoughts. One participant stated: "I try to push thoughts that the performance can go wrong away, because when these come it is very bad. So I really try not to get into this because it just makes no sense to get those thoughts" (P4-*I*). Participants tried to do this by using positive self-talk and focusing on thoughts that gave them confidence. Some participants stated that they deliberately tried to view the audition as a challenge and opportunity to demonstrate their skills: "I tried to keep myself in a good mood, like not focusing on how nervous I am, on my excitement, more about finally I can play now and let's make some music" (P4-*I*). Others used humor to reframe mistakes during the audition: "In this moment I tried really to take it funny, to laugh about it, to say, 'OK, this is just a funny mistake, it is not my fault so I don't care'" (P4-*I*).

Routines. Five participants also used behavioral routines prior to and during auditions. Participants described clearly defined preperformance routines as well as specific behavioral routines to use during their performance. Some participants mentioned routines to ensure they would be "taking their time" and be in an optimal mental state during the audition: "Looking around,

I have time, I don't really have to hurry; it is like for the stress, to just feel you have the time" (P8-*I*); "It gives you time to mentally prepare yourself for the upcoming thing" (P7-*I*). Overall, these routines seemed to strengthen the participants' confidence and provided a sense of control over their performance as was best illustrated by the following quote:

> I thought of everything: the ambiance I would like to create, what I wanted to achieve, but also technical things. I had agreed with my teacher to control all the things I can. Like, OK, prior to this excerpt I am going to stop and do a technical thing with my instrument. So when I did a run through, I followed all these steps as well and that gives a kind of structure. Then you know that you are going to follow that and you don't have to be afraid that something happens. I don't know, at that moment you think, "OK, but then I do this and then that." In this way everything has been thought of. (P7-*I*)

Attentional control. Most participants also attempted to control their anxiety during the audition by trying to direct their focus to specific music-related aspects. Some participants described focusing specifically on their tuning and intonation:

> [My] focus is on playing in a good tune so that my intonation is good, and yeah, trying to make the best music" (P5-*I*). Others directed their focus more on physical aspects of playing, as described by one participant: "I was really trying to focus on my fingers." (P8-*I*)

Substance use. Finally, two participants indicated that they might resort to the use of prescription drugs (i.e., beta-blockers) to manage their stress levels during auditions. One participant argued,

> I definitely have experience [with beta-blockers]; they work really well. I have a sort of rule for myself that I will never use it during concerts [. . .] But with auditions I'm all for it and I use it as well, because actually it is a very unnatural situation. Everyone always says it is about making beautiful music and stuff—and that is true—but people are not there for the music, they are there to choose. I think that is so contradictory, so why not. It's not like it makes you play better; it just gives you the confidence you can play the way you normally can. (P7-*I*)

Discussion

This exploratory study aimed to gain more insight into the practice and performance management strategies used by emerging musicians in preparation for mock orchestra auditions. Auditions can present highly stressful performance contexts (Kenny et al., 2014; van Kemenade et al., 1995) and form a key challenge for many aspiring professional classical musicians (MacNamara et al., 2008). Understanding musicians' practice and performance behaviors can provide valuable insights into the skills needed to reach this level of expertise as well as ways to further improve the quality of practice and performance to effectively make the transition to the professional field.

Quantity and quality of practice

The first two research questions related to how participants shaped the quantity and quality of their practice in preparation for the mock audition. Overall, participants spent on average 33 hr per week (4.7 hr per day) on music-related activities. Within these 33 hr, around 5% (1.6 hr per week) and 47% (16.2 hr per week) were spent on individual practice, with and without a teacher, respectively. In line with the findings of Ericsson and Harwell (2019), both types of individual

practice were perceived to be the most relevant activities to prepare for the audition. However, not all music-related activities were directly related to the audition, as participants also engaged in other activities (e.g., orchestra performances) as part of their academy work. Evidently, this was a specific feature of our case context. Nonetheless, some parallels can potentially be drawn with other emerging musicians. MacNamara et al. (2008) have already highlighted that musicians often experience increased time constraints when transitioning to the professional field. Notably, for the participants in the present study, these additional activities seemed to compromise confidence in their ability to adequately prepare for the audition. This is consistent with Pecen et al. (2018) who found that confidence is often directly related to the total time spent practicing. Drawing on the results of our study, it can be suggested that emerging musicians would benefit from developing formal practice strategies that allow them to adequately prepare and gain confidence in their preparation, even under considerable time constraints.

Regarding the quality of practice, participants demonstrated significant variability in the use of deliberate and self-regulating practice strategies. Following the cyclical SRL model (McPherson & Zimmerman, 2002), most participants demonstrated strategic long-term goal setting during the forethought phase (e.g., establishing key audition skills) and actively monitored their practice during the performance phase. At first glance, these results seem to support earlier work highlighting that advanced music students often engage in more extensive self-regulatory strategies (Hallam et al., 2021; Hatfield et al., 2017). However, further examination of our participants' practice behaviors suggests that, although they seemed to possess declarative knowledge of certain formal strategies, they did not necessarily translate these strategies into their daily practice. For example, throughout the interviews, participants stressed the importance of breaks. In line with such beliefs, Ericsson et al. (1993) argued that effective deliberate practice requires maximum focus and cognitive effort and might therefore only be sustainable for a limited amount of time. In reality though, participants' practice structuring was more often based on practical considerations and a perceived need to "make more hours" (Pecen et al., 2016). Moreover, although participants developed strategic long-term goals, during most practice sessions they were only able to define generic goals and used limited reflection following the session.

Performance management strategies

The third research question focused on the performance management strategies used in relation to the auditions. Overall, our findings highlight the wide variability and idiosyncrasy of the adopted strategies, with none of the identified categories being consistently used by all participants. Overall, participants used a combination of short- and longer-term cognitive and behavioral strategies. Cognitive strategies included imagery (DeSantis et al., 2021) and cognitive reframing (Clark et al., 2014) as well as attempts to control one's attention during performances. Research demonstrates that established musicians are typically more effective in regulating their attention under pressure compared with music students (Buma et al., 2015; Oudejans et al., 2017). Interestingly, participants in the present study tried to focus primarily on technical or physical aspects of playing (e.g., fingerings) to control their attention. Recent evidence suggests, however, that such a focus on technical or physical aspects of playing (i.e., internal focus) might actually be detrimental for performance quality under pressure as it tends to disrupt automated movement patterns (Mornell & Wulf, 2019). In contrast, a focus on expressivity (i.e., external focus) might be more beneficial for performance quality, although further research is needed to examine the influence of an internal and external focus of attention on MPA (Williams, 2019).

Behavioral strategies included relaxation techniques (Kenny et al., 2014), routines (Osborne et al., 2014), and practicing under pressure (Bakker et al., 2016). Wan and Huon (2005) have already found that practicing under pressure can improve performance in real-life stressful circumstances. For participants in the present study, this was primarily done through try-outs (Kenny et al., 2014; Roland, 1994), although additional strategies were also mentioned, including practicing under physical exertion. Pecen et al. (2016) suggested that physical exertion might be used to simulate physiological symptoms of MPA. Such strategies also relate to the principle of *planned disruptions*, which might increase individuals' resilience to pressure (Kegelaers et al., 2020). As such, future research might further examine how planned disruptions can be used to prepare for high-pressure musical performances (see also Kegelaers & Oudejans, 2020). Finally, substance use was mentioned as a performance management strategy. Some scholars have previously found that up to 30% of classical musicians resort to using beta-blockers (Kenny et al., 2014). Findings from the present study confirm that a number of musicians still possess insufficient alternatives to manage MPA (Pecen et al., 2016).

Practical implications

Some practical implications might be derived from the current study. Music education institutions (e.g., conservatoires) can support students by providing tailored interventions to prepare for auditions. Rather than focusing solely on managing MPA (cf. Osborne et al., 2014), such interventions should be set up holistically, integrating both practice and performance management strategies (Kegelaers & Oudejans, 2020). For example, students might be taught self-regulating strategies (e.g., short- and long-term goal setting and reflection), which allow them to translate their musical interpretations into concrete and tangible goals, track their progress, self-organize, and revise their practice strategies where necessary (Hatfield et al., 2017; McPherson et al., 2019). As evidenced by the present study, providing knowledge of such strategies alone might not be sufficient, and specific attention should be placed on encouraging students to translate these principles into their actual practice. Given common preferences for high practice volumes and the potentially increased time constraints when transitioning to the professional field, interventions should also demonstrate how self-regulating strategies can be effective in preparing for performances within a limited time frame. This could, for example, be done by encouraging students to use such strategies to prepare for a challenging recital within a limited time frame (see Bakker et al., 2016).

From a performance management perspective, interventions may draw on mental skills training programs (Clark & Williamon, 2011) and teach students an amalgamation of different techniques (e.g., routines, imagery, relaxation, and cognitive reframing) to regulate their arousal and attention under pressure. However, one key finding of the present study is that the use of such strategies is often idiosyncratic, and musicians should therefore be encouraged to explore which approach works best for them. Mental skills might also be emphasized as viable and healthy alternatives to substance use. Furthermore, students could be informed about the value of practicing under pressure in preparation for actual performances and be encouraged to do so frequently, for instance by organizing try-outs. More recently, scholars have also started exploring the use of augmented reality, finding promising results (Aufegger et al., 2017).

Strengths and limitations

Several strengths and limitations of this study should be recognized. Strengths included the use of an underrepresented study population and the intensive qualitative research approach,

which allowed us to investigate participants' practice routines and behaviors in detail over several weeks. This approach, in contrast to retrospective designs, helped reduce the potential for recall bias. On the contrary, despite providing a realistic context, the representativeness of mock auditions for real-life auditions remains unknown. Moreover, the non-random sampling and a limited number of participants within our collective case study do not allow for broad generalizations. Our approach also did not allow for a more detailed exploration of potential differences among participants based on, for example, gender, age, musical instrument, or selected repertoire. Finally, Chaffin and Imreh (2001) argued that analysis of verbal accounts might still fail to capture the full complexity of actual practice behaviors. As such, future research could advance the current study by directly examining musicians' in situ practice behaviors (e.g., McPherson et al., 2019).

Conclusion

This study aimed to provide detailed insights into the practice and performance behaviors of emerging professional musicians in preparation for orchestra auditions. Results from our study indicate that participants demonstrated wide variability and idiosyncrasy in their adopted practice and performance strategies. Most participants had knowledge of and demonstrated some mastery of deliberate and self-regulating practice strategies but at the same time seemed to prefer high volumes of practice. Relating to performance management strategies, participants used a variation of both long- and short-term cognitive and behavioral strategies. Findings from this study may help music education institutions, as well as emerging musicians themselves, to prepare for real-life orchestra auditions.

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