Research Article

Seven-year-old beginner cellists' lived experiences of music performance

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Abstract

Music performance is a demanding activity requiring complex coordination of abilities from diverse domains. It can be perceived as a form of artistic expression and communication but experienced as a demonstration of personal competency with emotional ramifications that affect musicians' ongoing interest and motivations. Participating in music performance is often a key part of musical development; however, children's perspectives on formative experiences of music performance during early learning are largely unknown. Given the broad range of interacting factors and significant implications, understanding musicians' performance experiences, particularly for child learners, is vital to support sustained engagement. The present study investigated 14 seven-year-old beginner cellists' experiences of music performance during the first 18 months of tuition via a novel combination of Interpretative Phenomenological Analysis and Participatory Action Research methodologies. Three superordinate themes emerged: (1) feelings of arousal and emotional valence during performance, (2) the identification of four distinct performance environments, and (3) the impact of performance experiences in each environment on children's personal development, including fostering autonomy, agency, confidence, altruism, and social connection. The findings have pedagogical implications for how educators and parents of novice musicians in middle childhood can provide safe music learning environments with varied means of engaging in a range of supportive performance opportunities.

Keywords

children and adolescents, emotion, instrumental pedagogy, music education, music performance, pedagogy, music performance anxiety, qualitative

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Music performance is a complex activity engaging systems of planning, auditory feedback, and memory (Altenmüller & Furuya, 2016), requiring coordination and control over sensory-motor skills (Zatorre et al., 2007). The experience of music performance is physically and mentally challenging (Papageorgi & Kopiez, 2018), with emotional ramifications that impact musicians' ongoing interest and motivation (Rucsanda et al., 2020). Therefore, although performance provides a platform for musicians' artistic expression and communication (Juslin & Timmers, 2010), it can be experienced as a highly stressful platform to demonstrate competence (Vervainioti & Alexopoulos, 2015). Given the range of interacting factors and the implications for sustaining engagement, greater understanding of musicians' performance experiences, particularly those of child novice learners, is needed.

Young people's music performance experiences have been investigated through the lens of beneficial outcomes. For example, group singing can promote children's self-concept and social inclusion (Welch et al., 2014), classroom music-making can enhance self-esteem (Rickard et al., 2013), and improvisation can develop creative thinking and creativity (Ramón & Chacón-López, 2021). Self-efficacy can contribute to the quality of musicians' performance experiences (Ritchie & Williamon, 2012). Furthermore, the cyclic nature of self-regulation, whereby learners' prior experiences in performance inform adjustments in their self-beliefs, perceptions, and behaviors in current and future experiences, contributes to motivation (McPherson & Zimmerman, 2011). Peistaraite and Clarke (2020) found that emotion regulation can improve musicians' self-regulated learning in performance practice. They suggested incorporating emotion regulation training strategies in music performance experiences could benefit music education contexts.

Researchers exploring young musicians' emotions and performance have found that their preperformance emotional states are complex (Kaleńska-Rodzaj, 2020), and emotional fluctuations during rehearsals and concerts impact adolescents' interest in future musical participation (Sutherland & Southcott, 2021). Rucsanda et al.'s (2020) study on performers' emotions in music competitions found that negative emotions were related to lower-quality performances. In contrast, positive emotions, low arousal states, and higher dominance were associated with higher-quality performances. These findings resonate with research on university students' strong performance experiences, which found links with eudaimonic and hedonic wellbeing and sustained engagement (Lamont, 2012). Peak experiences (Maslow, 1968) in performance can explain the high level of exhilaration musicians sometimes feel through playing music. Such optimal experiences have been investigated through flow theory, which explains the enjoyment felt when one is intensely immersed in an activity (Csikszentmihalyi, 2014).

Custodero (2002) found that children's flow in music can occur through "self-assigning, self-correcting, anticipating, expanding and extending the musical materials in their environments" (p. 8). More recently, Custodero (2011) explained that young people experience flow during music performances when they succeed in areas they perceive as difficult and are motivated when challenges expand creativity. Freer (2009) found that flow characteristics in adolescent boys' descriptions of choral performances were interlinked with the ensemble, their ability to make adjustments, the conductor's sensitivity to student needs, repertoire selection, and rehearsal techniques. Relatedly, Bakker (2005) found that teachers' perspectives on their jobs played a role in their flow, and by applying emotion contagion theory, discovered that flow may transfer from teachers to students.

Being deeply engaged in music performance can be rewarding and include opportunities to share musical achievements (Lamont, 2012). However, young musicians can experience nervousness during recital performances and worry about making mistakes in front of their audience (Ryan, 2004). Furthermore, young children can perceive performance as highly stressful,

with location, prior experiences, and repeated opportunities influencing behavior and responses (Boucher & Ryan, 2011). Papageorgi and Kopiez (2018) report that, from an early stage of musical engagement, learners' performance experiences can contribute to music performance anxiety (MPA), ranging from adaptive to maladaptive. Adaptive MPA can have beneficial outcomes that contribute to increased interest, while maladaptive MPA can be detrimental to performance quality and experience (Papageorgi et al., 2013). Further research suggests that while trait anxiety and gender can predict MPA (Osborne & Kenny, 2008), social phobia (Osborne & Kenny, 2005) and social anxiety associated with others' judgment (Nicholson et al., 2015) can contribute to increased performance anxiety. Furthermore, postevent rumination is linked with social anxiety and subjective performance quality (Nielsen et al., 2018). Perfectionism has been connected with MPA in school-aged students (Patston & Osborne, 2016) and can be associated with social phobia (Dobos et al., 2019), and hypervigilance can consolidate anxiety states and be adapted into learned behaviors (Osborne, 2015). Our previous investigation into children's music practice found that parents and children can share perfectionism perceptions, including the views that perfectionism is an inherent learner trait, persistence during practice fosters intrapersonal growth, and perfection is subjective, varying according to learner need (MacArthur et al., 2024a). Nevertheless, such results also align with research indicating that perfectionism can positively impact young musicians' motivation, effort, and achievement (Stoeber & Eismann, 2007). These findings therefore suggest that young musicians require high support, empathy, and care during early performance exposure to avoid or overcome maladaptive MPA symptoms.

Teachers have the potential to shape students' initial encounters with music performance, impacting levels of enjoyment or worry when approaching such contexts (Ryan et al., 2021). Teacher encouragement is critical in helping learners establish positive foundational experiences, which becomes vital in effectively coping with unfamiliar MPA symptoms (Osborne & Kenny, 2008). Furthermore, teachers can view their role as supporting learners' responses during performances, helping them acquire strategies by creating a safe learning environment where students learn to accept mistakes (Sieger, 2017). However, superficial teacher feedback can contribute to young musicians' perceptions of perfectionism and anxiety. Ryan (2004) and Ryan et al. (2021) found that, despite being encouraged to perform by teachers, students are rarely taught key experiential factors that help build resilience during performance. Furthermore, instead of engaging students in meaningful dialogue to provide practical support, teachers can offer generalized advice, such as instructing them not to worry and practice more, even though such strategies may not necessarily alleviate anxiety.

Positive experiences in lessons and confidence in musical skill development are known to enhance young musicians' happiness in performance; however, there is limited research investigating the range of ways children encounter music performance (Ryan et al., 2022), and little knowledge of how nuanced individual performance experiences impact children's musical engagement. Therefore, the present study contributes to the literature with the research question: how do 7-year-old beginner cellists perceive and experience music performance during the first 18 months of learning?

Method

Design

The present study was drawn from the first author's doctoral project that explored the lived experiences of 14 of her 7-year-old beginner cello students and her reflexive teaching practice

as a teacher-researcher during the first 18 months of tuition. The impact of early learning on the children's longer-term engagement was investigated for an additional 3 years. One important emergent theme from the doctoral study was children's performance experiences, which were perceived as integral to musical development and provided the focus for this article. For the purpose of this research, music performance is described as children's performances for an audience that present their skill acquisition in technical and expressive capacities for evaluation and feedback.

The University of Melbourne Human Research Ethics Committee (ID 1544350) provided ethical approval, and the research was conducted in an Australian independent major metropolitan K–12 school, where students typically came from middle to high socio-economic backgrounds. The school, where the first author was employed as a cello teacher, granted permission for the research to be conducted as part of the existing instrumental music teaching program. To mitigate potential dependency issues and provide support, the Coordinator of Junior Music acted as an independent advocate, inviting partipants to take part in the study and consulting with them throughout the research process. Participation in the study was entirely voluntary, with both children and their parents providing written, informed consent prior to data collection. Participants were free to withdraw from the study at any time without affecting their ongoing cello tuition or broader involvement in the school's music education program.

Participants

All 14 child participants (five boys and nine girls) completed a term of introductory stringed instrument (violin, viola, and cello) classes as part of their Year 2 curriculum prior to enrolling in one-to-one cello lessons with the first author. The 14 children were among a larger group of cello students who were all invited to participate in the study, with only those who chose to be in the study included. In all instances, the participating parent was the child's mother. The names of participants have been changed to protect identities, a practice that aligns with the Australian Ethical Code of Conduct.

Procedure

A unique combination of research methodologies, Interpretative Phenomenological Analysis (IPA; Eatough & Smith, 2017; Smith et al., 2009) and Participatory Action Research (PAR; Cochran-Smith & Lytle, 2015; Kemmis et al., 2014) was employed. IPA is a rigorous qualitative research method based on phenomenological philosophy and hermeneutic ideology used to investigate individuals' experiences of significant life events, uncovering the subjective and contextual meanings they make (Smith et al., 2009). It captures rich, detailed narratives from participants, reveals key emergent themes and patterns from their accounts, and positions the researcher as an insider interpreting idiosyncratic experiences (Eatough & Smith, 2017; van Manen, 1990). Specifically focused on investigating lived experience, IPA is a relevant methodology for music education research as it provides a thorough approach to understanding the implications of practice (Crawford, 2019). PAR is used extensively in education research as it emphasizes the role of the teacher as a researcher investigating educational processes and experiences with their students, whereby the teacher–researcher's intentions, interpretations, reflections, and collaborations are critical to the methodology (Cochran-Smith & Lytle, 2015), and results inform future practice (Kemmis et al., 2014). Kemmis et al. (2014) explain that critical PAR aims to transform participants' knowledge, conduct, and practice conditions and promote logical, meaningful, and inclusive outcomes

by thoroughly understanding stakeholders' processes and their underpinning frameworks (Kemmis et al., 2014, p. 67).

Data collection and analysis

IPA data were collected by the first author through semi-structured interviews with the children and parents (Eatough & Smith, 2017). All participants were interviewed individually soon after lessons commenced, once consent forms had been received. Children participated in six further interviews, conducted once per school term over an 18 month period, and parents took part in a second interviews after 18 months. Children were interviewed one-to-one in a familiar school setting, and parents attended separate interviews at the school. On average, interviews with the children lasted approximately 15 minutes, while interviews with parents ranged from 20 to 30 minutes. Participants were asked open-ended questions about musical development, focusing on the children's lived experiences. Interview discussions with the children and their parents captured the children's detailed encounters with music performance at home and in the school environment, which emerged as ubiquitous in their learning and focal to engagement (see Supplemental Appendix A for interview question examples that elicited children's responses regarding their performance experiences). An idiographic analytic approach to IPA was undertaken whereby the first author was immersed in the data. This involved meticulous re-reading of interview transcriptions, detailed note-taking, highlighting rich textual passages, finding and tracing patterns, codifying thematic materials, abstraction and contextualization of superordinate themes across the cohort, structuring and organizing findings, developing a narrative supported by data extracts, and reflecting on personal perspectives (Smith et al., 2009). The second and third authors verified the accuracy of the first author's data coding throughout the research period, thereby mitigating bias and ensuring the credibility of the analysis. The authors' work reflects Yardley's (2000; 2016) four dimensions of quality qualitative research: "sensitivity to context; commitment and rigor; transparency and coherence; and impact and importance" (Yardley, 2016, p. 295).

In accordance with critical PAR principles that espouse the importance of collating a portfolio of compelling research evidence (Kemmis et al., 2014), the first author collected data through a weekly lesson observation, participation and reflection protocol documenting the teaching and learning processes, teacher–student interactions, and teacher reflections on student learning behaviors (Supplemental Appendix B). The protocol recorded teacher reflexivity, including pedagogical accommodations for each child's idiosyncratic learning requirements and observational notes on the children's personal attributes and learning capacities in lessons and rehearsals, with nuanced discussions of home cello playing also noted. A weekly skill development rubric (Supplemental Appendix C) provided a formative assessment record of the children's musical development, and a practice journal served as regular communication between the teacher, student, and parent. Gathering evidence through multiple means allowed the first author to triangulate and interrogate the evidence with the second and third authors, who acted as "academic partners" in the study (Kemmis et al., 2014, p. 189). The authors' partnership also supported the first author's reflexivity, a central process of IPA and PAR.

IPA emergent themes were synthesized with the PAR documentation of the children's learning and practice behavior, teacher reflections, and reflexive practice. The combined data sets revealed insights into the children's perceptions of music performance in the school and home environments, including their self-efficacy, emotional responses and valence, self-regulatory abilities, and interest development. Verification occurred through close consultation with the

second author, and credibility was further authenticated by the third author (Smith et al., 2009).

Results

Three superordinate themes regarding children's experiences of music performance emerged from the data: (1) feelings of arousal and emotional valence during performance, (2) four distinct performance environments, and (3) the impact of performance experiences in each environment on children's personal development. The following section discusses each superordinate theme in the context of the sample.

Theme 1: Feelings of arousal and emotional valence during performance

All the children reported powerful experiences of being seen performing and watched by others while participating in music performances. Their self-perceptions in these contexts elicited strong emotional responses that contributed to heightened affective states and directly related to their motivation to re-engage with musical development. Analysis of the children's descriptions of their experiences revealed two interrelated emotional response dimensions: arousal and valence. Arousal refers to an individual's intense physiological response to experiencing emotions, while valence refers to the intrinsic positivity or negativity of an emotional experience (Marti-Marca et al., 2020; Russell, 1980; Sloboda & Juslin, 2001).

During music performance, all the children's arousal states were highly stimulated, and valence was experienced as acutely positive or negative. Excitement and liveliness arousal, linked with positive valence, were experienced by children who reported stable self-efficacy when they felt expectations of success. These children enjoyed sharing their accomplishments with audiences they perceived as accepting and receptive and when performance outcomes matched expectations. Such factors contributed to positive transformational effects on the children's behavior, an increased desire to perform again (often in higher-stakes environments), and an enhanced interest to continue learning. Anxiety and despondency arousal, connected with negative valence, were experienced by children with unstable self-efficacy and regard for audiences. Disparity between performance expectations and outcomes further reduced their self-efficacy, resulting in negative transformational effects on behavior and decreased desire to perform again and/or maintain low-stakes future performances, resulting in diminished interest in continued musical engagement. Table 1 presents participant quotations, found to be IPA gems (Smith, 2011), illuminative and typical of the children's intense arousal and valence responses to experiences of being seen performing.

Theme 2: Four distinct performance environments

The children experienced performance in four environments, categorized according to setting, activities, audience, modes, and stakes (Table 2). In the *home* environment, children performed alone and/or with family, practicing and developing skills. Some children organized, hosted, and played in formal concerts, for which they curated programs, made tickets, and designed posters. Informal performance modes were reported, often incidentally during practice sessions and maybe for family and toys. Impromptu performances were unplanned soirees prompted by familial pride in sharing musicianship.

In the *teaching studio*, children reported a sense of performance as they were seen developing skills with the teacher-researcher. Formal performance experiences were perceived when

Table 1. Children's Arousal and Emotional Valence Experience Quotations.

Excitement arousal and positive emotional valence	Anxious arousal and negative emotional valence
It makes me feel famous!	I'm scared I might do something wrong, and everybody sees . . . It might go on camera, and it might go all over the world.
Everyone gets to see you, it can give them techniques, like they can learn from another person, not just themselves!	The main thing I think is, "Just get it right this time!"
I just felt very happy like cos people are watching you and they, like um, they're very proud like of you . . . I want to teach them.	I just try and . . . look at the music and not look over there, otherwise I'd be scared . . . there's lots of seats there, so there's going to be a thousand, million, trillion eyes looking at me.
They [family] listen to me and . . . when they sit on the couch downstairs, it makes me feel happy and proud! . . . Because I feel that they're proud of me for playing it.	They're like, "Look at him, he's going to muck up." And then, "Yay, he mucked up."
My little sister . . . always tries to take the cello off me [to] just start playing! And when she's going to bed, mum said, "She won't go to sleep!" My mum says to me to play the cello, and she just goes to sleep!	I'm probably going to make a mistake and Dad's going to tell me off.
They [grandparents] love me practising cello . . . They just stare at me and then they would start clapping and say, "Very well done." And then I'll be very happy because I like being . . . praised!	Everybody was staring at me . . . I think I was a bit too scared . . . I felt like I wanted to go home and play on my phone . . . because it was scary.
I was a bit nervous and a bit excited at the same time. I was nervous that I might get it wrong and also because I'm a bit shy, and I was excited because it was my first time playing on stage and my sister and my mum were there! And [then during the performance] I forgot about being shy!	The String Concert . . . I didn't really like, you couldn't, I was playing any note because I couldn't really like, get, like . . . concentrate on the music.
It was really fun cos I had my friends there . . . and we were like, "Can we do it again!!!"	It was really hard because you heard all these sounds going on and you didn't know what to do and what to play!
Being on stage and getting new songs, there's lots of people cheering with it . . . I'm happy and proud of myself!	In my brain, everyone's looking at me and it makes me all stumbly and then I'm worried that they might see me do a mistake.

Table 2. Four Performance Environments.

Setting	Activity	Audience	Mode	Stakes
Home	Play, practice, develop skills	Self, family	Formal/Informal/ Impromptu	High/moderate/ low
Teaching studio	Play, learn, practice, develop skills	Self, teacher-researcher	Formal/Informal/ Impromptu	High/moderate/ low
Ensemble rehearsal room	Play, rehearse, learn, practice, develop skills	Self, peers, teachers	Formal/Informal/ Impromptu	High/moderate/ low
Concert platform	Present skills and musicianship	Self, peers, teachers, family, community	Formal	High/moderate

children played for an assessment, and this type of opportunity was associated with making progress, functioning as a milestone performance. Informal performance scenarios occurred during skill acquisition, as the children felt expectations of learning new skills. Impromptu performances were characterized by playful interactions, such as improvisation and creative play, occurring between the student and teacher in the pedagogical process.

In *ensembles*, children practiced and rehearsed, sharing and comparing their musical abilities with peers and teachers. Formal performances included practice runs for concerts, and informal performances occurred as children imagined themselves playing in concerts or were watched by peers, teachers, and parents. Impromptu performances occurred during creative "jam sessions," learning new techniques or concepts.

Concert performances were viewed as formal modes of presenting children's skills and musicianship to the school community. Home, studio, and ensemble environments could be experienced as high-, moderate-, or low-stakes settings, whereas concerts were either high- or moderate-stakes.

Across the different environments, the children reported formal performances as summative of their musical development and anticipated audience evaluations. Informal performances occurred during the learning and development process; here, the young learners expected strategies from their audience on how to improve. Impromptu modes were relaxed and improvisatory, focused on play and expression with little expectation of judgment. Although formal modes equated with increased pressure, how the children experienced this depended on their self-regulatory capacities, prior encounters, investment in the environment, relationship with their audience, perceptions of expectations, and significance of outcomes.

The children's valence in each environment over 18 months was analyzed and categorized as shown in Table 3. Charlie and Jack withdrew from learning after 9 months; therefore, longitudinal data were unavailable for these students. Eight children experienced stable, positive emotional valence, characterized by feelings of happiness, satisfaction, optimism, and fulfillment, within all environments. Pippa, Isabella, and Charlie (during the 9-month learning period) reported only occasional negative emotional valence in one (Pippa, Isabella) or two (Charlie) environments.

Three students (Jack, William, and Grace) experienced more complex variation and instability in their performance experiences because of arousal in the different environments. Negative valence was observed as apprehension, rumination, agitation, impatience, shame, and disappointment. In the 9 months of learning, Jack's negative valence in home and rehearsal environments and occasionally in lessons was expressed as frustration as he perceived himself as slow in acquiring skills. However, later, when his skills were well established, Jack enjoyed performing on stage. Findings suggested that Jack's performance difficulties contributed to reduced engagement, and it is unknown whether his valence could have stabilized with continued support.

In early learning, William's frequent negative valence was found during performances at home, in lessons, in concerts, and occasionally in rehearsals. He often engaged in off-task behavior and displayed poor self-regulation. These behaviors were perhaps associated with a learning challenge, as William experienced emotional difficulties correcting an underdeveloped hand muscle caused by excessive digital tablet usage. Over 18 months, William's valence in lessons and concerts became increasingly positive, and overall improvements in his self-regulatory skills were observed.

Grace's initial negative valence during performance in lessons and concerts was attributed to unsafe prior learning experiences. A reserved, cautious child, Grace previously learned piano with a teacher who had maintained unachievable standards in lessons and ignored Grace's

Table 3. Children's Emotional Valence in Each Performance Environment.

Student	Home	Studio	Rehearsal	Concert
Ava, Daniel, Ellie, Henry, Lily, Matilda, Olivia, Zoe	Positive	Positive	Positive	Positive
Pippa	Positive	Positive	Positive	Occasionally negative
Isabella	Positive	Occasionally negative	Positive	Positive
Charlie[a]	Occasionally negative	Positive	Positive	Occasionally negative
Jack[a]	Frequently negative	Occasionally negative	Frequently negative	Positive
William	Frequently negative	Negative → Occasionally negative	Occasionally negative	Negative → Positive
Grace	Occasionally negative	Negative → Positive	Positive	Negative → Positive

[a]Charlie and Jack withdrew after 9 months.

reluctance to perform in concerts. These teacher expectations contributed to Grace's conditioned anticipation of insecure, formal, high-stakes performance experiences. Grace also faced challenges with dyslexia, which were recognized at this time.

Over 18 months, teacher strategies for supporting William and Grace included providing increased opportunities for low-stakes, informal performances, a strong focus on creative play with scaffolded skill development, and coaching for self-efficacy and self-regulation, primarily on managing learning difficulties (MacArthur et al., 2024b). These strategies were critical to improving William's valence in the studio, rehearsal, and concerts and Grace's valence in all environments.

Theme 3: Impact of performance experiences in each environment on children's personal development

Performance in each environment was found to impact the children's personal development. For most students, this was positive, resulting in enhanced independence and confidence through experiences of autonomy and agency. Children also experienced music performance as a way of developing interpersonal connections, including nurturing peer relationships, fostering family unity, and, for one student, fulfilling altruistic, humanitarian goals. To understand the scope of the children's performance experiences, the following section examines their encounters in each environment in greater detail, noting key emergent subthemes relating to personal impact and including supporting interview excerpts.

At home. Home practice was a setting where children refined skills, achieved fluency, and explored musicianship through technical work, learning repertoire, and creative play. However, practice was more than a solitary endeavor focused on skill development, as children regularly shared musical abilities and artistry with family through the full range of formal, informal, and impromptu performance modes. For example, during the first 3 months of learning, Matilda's mother described delight in watching her daughter in home performance practice: "She's quite cute when she practises because she gives us a little mini concert when she practises. It's lovely."

Being seen performing at home resulted in recognition and affirmation of accomplishment from family, which contributed to children's personal growth and independence. For example, after 10 weeks of lessons, Zoe described experiences of competency, pride, autonomy, and awareness of cultural differences and generational privilege while playing for grandparents:

> At my grandparents' house, they love listening to it because they love listening to the cello . . . When they were small, they were very poor in China, and they didn't have any instruments to play . . . once my grandma wanted to try, so I give it to her, and went like this, "Eeeeeeeeeeeeee!!!!!!!" Because she didn't know what to do!

Lily reported, after 5 months of lessons, that home cello playing provided a powerful sense of agency, which was linked to her ability to regulate her parents' emotions: "I can even make Mum and Dad happy and sleep a lot when I play. Every time I play, it's a calm sound for them, and they fall asleep straight away!" After 18 months, Lily's mother described how her daughter's informal and impromptu home performances replaced structured practice. She explained that familial musical experiences promoted unity and were transformative for Lily, contributing to enthusiasm and motivation:

> She doesn't practise, but she loves to perform! She sits there with her little sister; she's got her violin. They sit and perform quite a bit. But I don't know you'd call that practising! She comes out of her shell, I guess in that sense, her confidence is wanting to perform, wanting to do things.

Ellie shared the theme of wanting to be seen performing rather than merely practicing at home. For example, when lessons commenced, Ellie's mother anticipated that performance, specifically informal and impromptu home performances and formal future concerts, would elicit arousal and positive valence for her extroverted daughter, enhancing engagement more than practice alone:

> I think she needs to be dedicated, a lot of practice . . . That's her big thing. She may not always practise, but she'll always perform. So, she'll get it out to show someone, to play to them . . . and you're having a concert at the end of the year, that's really excited her!

During solitary home practice, the children imagined formal performance settings. They reported affirmation and enjoyment playing for toy audiences in pretend high-stakes, future-focused aspirational scenarios, such as being on television or in professional orchestras. For Olivia, after 14 months of lessons, playing the cello for toys functioned as performance practice:

> I like cello. I go home and pretend I'm practising, playing in a concert, but in front of my dolls! Or any of my toys . . . I know they're not alive and they wouldn't be able to clap, and they wouldn't care if I made a wrong note, because I'm just pretending.

However, during the first 6 months of practice, Jack, whose home cello playing was unregulated, described feeling overwhelmed by judgment when he imagined high-stakes formal performances: "Whenever I'm playing a piece, I'm like, 'OK, yeah, this is just like this.' And . . . then, I imagine how I would play this and not stuff up on stage."

In the teaching studio. Children felt a sense of performance in the studio as they engaged with the teacher-researcher during skill development. Most students had positive valence in this

setting; however, four children with lower self-efficacy experienced less stable valence. Jack experienced anxiety when he perceived his skill mastery as slow or ineffective. Isabella, William, and Grace's valence was attributed to issues in managing emergent learning difficulties. For example, Isabella encountered music literacy challenges later attributed to auditory processing and memory disorders during the second term of learning. The teacher-researcher documented in her reflection protocol that Isabella exhibited unstable behavior while trying to understand notation, reporting "she was unfocussed, almost refused to do tasks," rejected "direction because this equates to failure," and "flips between asking for help and denying help." As Isabella was excited by the idea of playing in concerts with her cellist brother, the teacher-researcher organized for the siblings to perform the following term. This future formal, high-stakes performance goal energized and motivated Isabella, and, through concert preparation with the teacher-researcher, Isabella's perception of performance in lessons shifted. Two weeks later, it was noted that Isabella had "completely changed"; she was cooperative, applied, and productive. After the concert, an exhilarated Isabella reflected that although it was "kind of embarrassing" and "scary" with "thousands of people sitting down and there's only two of us on stage," she wanted a repeat performance.

In the ensemble rehearsal room. In rehearsals, children's arousal was linked to self-efficacy and regard for peers as they measured their skill development against the capacities of others. For 12 children, playing with peers was "fun," celebratory, and exciting. After 14 months of lessons, Ava expressed her elation in communal competency and agency during Junior Orchestra rehearsals: "Oh!! It's very fun! I like how the violins, they join violas, cellos . . . and they all get different parts . . . We all sound really good together! All of us! It sounds like the real thing!"

Conversely, Jack and William experienced vulnerability during rehearsals, questioning their abilities. Jack explained after 9 months of lessons, which was shortly before he withdrew from lessons, his internal conflict and isolation during rehearsals:

> I'm not like most people, where they're like, "Oh, I just stuffed up." Usually, I'm like, "Oh crap!" . . . I'm [choking], sweating all over the place, thinking, "Where are they up to, where are they up to?" . . . And I usually stuff up again when I think, "I'm doing it right." But then, I've stuffed up a million times!!

On the concert platform. The concert platform was the most explicit performance setting viewed as a formal medium- to high-stakes environment. Arousal in concerts arose from tensions in children's desire to be seen by a wider audience as capable and accomplished and uncertainty in their capacity to meet expectations. For example, after 12 months of lessons, Ava described an Assembly performance:

Ava:	Everyone watching me was nerve-racking, so it was those two pushed together. Nerve-fun-a-racking!
Stephanie:	Nerve-fun-a-racking!! How did you feel after the performance?
Ava:	Proud!
Stephanie:	Proud! And how did you feel during the performance?
Ava:	Nervous that people wouldn't like it.
Stephanie:	Why were you concerned about that?
Ava:	Because, if people don't like then, I don't know, but I don't like it.

Ava's nervousness was experienced as excitement, and although she was concerned about audience perception and judgment, Ava felt pride in accomplishment as the performance matched expectations.

By contrast, Grace and William described their negative arousal in concerts as "stage fright," arising from concerns about catastrophic outcomes associated with being seen making mistakes by their community. After 6 months of learning, Charlie described how his arousal and valence regarding concert performances were explicitly linked to anticipating his father's judgment:

Stephanie: What did you think while you were performing?

Charlie: I'm probably going to make a mistake, and Dad's going to tell me off!

Stephanie: For making a mistake?

Charlie: Yeah . . .

Stephanie: Tell me how you felt afterwards.

Charlie: Not really that great.

Matilda offered a different perspective on concert performances after 14 months. Rather than being concerned about audience judgment, Matilda's pride and autonomy in showcasing musical skills were associated with motivating and mobilizing her audience to participate in music: "Different people will hear music and then maybe be inspired to play it themselves!"

An unexpected finding was Lily's altruistic motivation to participate in future public performances. This emerged after 12 months when reflecting on future engagement:

Lily: I might go somewhere, and I might play it.

Stephanie: Where do you think you might play it?

Lily: Maybe in the city, to get some money for poor people.

Stephanie: What do you mean, "get some money for poor people"?

Lily: So I can get money and give it to poor people that don't have any money.

Stephanie: What do you like about that idea?

Lily: That then, everyone can have a home.

After 18 months, Lily's mother explained Lily's humanitarianism:

She's very observant. If she can help in any way, she does. We went [out] one day, and there was a homeless man . . . when it was getting dark, on a corner. I was hurrying her . . . and I thought, "I'll just let her know how some people live." She said, "Mum, can you see that guy? He's homeless." It was winter, he had a trolley, we couldn't see his face. She was literally taken aback as to how some people have to live . . . She said, "Can we help him?"

Lily's compassion for others and experiences of positive emotion regulation through music were associated with her chronic illness and being a children's hospital inpatient. During

admissions, Lily visited the hospital's Music Room, experiencing the therapeutic benefits of music firsthand. Lily's mother described:

> It definitely helped a lot when she had to be there weeks on end. Music, and other [activities], but it was mainly music . . . They had a jam session once! Her face lit up . . . It lifted her spirits so much! She forgot about everything else, where she was, her surroundings as well.

Lily's past experiences shaped her capacities and future aspirations. This resonates with evidence that all the children commenced lessons with expectations, informed by previous performance experiences, to play in concerts. Positive prior experiences contributed to most children's motivation and excitement for future encounters. However, Grace's previous piano learning included devastating performances that demotivated future engagement. When lessons commenced, Grace's mother requested the teacher-researcher avoid talking about concerts because "that's really scary" and postpone performance opportunities until Grace developed resilience. She explained:

> Her first Suzuki concert, she wouldn't go up, and they ended up taking her off stage, she was crying . . . The second concert, she went up after, when all the parents were leaving. And the big concert, she wouldn't go up. She cried. That was with everybody on stage . . . So, whenever she'd start to enjoy piano, she would get scared about a concert.

Olivia experienced positive emotional valence in all performance environments as she enjoyed being seen as creatively capable, mature, and autonomous and flourished in the exhilaration of building musical social connections. Formal concerts were particularly motivating for Olivia as she perceived this environment as a way of remediating two critical life difficulties: her parents' relationship and overcoming being "shy." Olivia's parents were recently divorced, and she viewed her concert performances as opportunities to capture their shared attention and unite her family. During this unstable period, Olivia discussed her difficulties moving between two homes. Olivia performed frequently at her mother's house; however, her father's house was ill-equipped for musical endeavors. After 14 months, Olivia performed in a major concert and reflected on the unexpectedly confusing outcome:

> I like concerts! Because my parents can see me. But I couldn't see them. My mum said, "The back of the row, near the door." And I'm looking up, and I'm like, "Oh, the lights are hurting my eyes." And my mum meant the front, and I'm like, "Oohhh!!??" And my dad was sitting right at the back. And I'm like, "Two parents in different spots!!?? Ahhh!!??"

Olivia also viewed performance as a way to overcome shyness, an unwanted trait that persisted from early childhood. Relinquishing shyness was a desirable but confronting part of growing up, and it was perceived as another form of separation from her parents. Olivia's longitudinal data revealed that with increased and higher-stakes performance opportunities, Olivia became the "more confident" person she believed herself to be. For Olivia, cello performance experiences were profoundly meaningful, helping her manage a range of emotional tensions during a sensitive time of her life.

Discussion and conclusion

This investigation of 7-year-old cellist's experiences of music performance during early learning sought to understand children's perspectives by listening to and interpreting their voices. The "student voice" in music education research is limited compared to education literature (Stavrou & Papageorgi, 2021), even though hearing children's narratives in music is essential to conceptualizing their musical lives and ensuring learning activities connect with their interests (Griffin, 2011). Previous work prioritizing children's voices has reflected the depth with which children describe meaning in their engagement in the arts, the extent to which they deeply value arts participation (Barrett et al., 2012; Barrett & Smigiel, 2007), and the importance of involving children's perspectives in music education policymaking (Barrett, 2017). This relational approach, missing from formal music performance research contexts, also recognizes children as co-researchers and expert agents in their experience that can powerfully inform future practice (Carnevale, 2020).

Notably, our study foregrounds a significant yet frequently overlooked area in the field of music education: children experience a powerful sense of "being seen" in acquiring and developing musical skills. Visibility through musicality contributed to the children's perception of themselves in four performance environments, triggered arousal responses, and elicited emotional valence. The interplay of these experiential factors impacted children's personal development, resulting in evidence of growth and musical motivation for most of the children that remained in the study. These pivotal experiences occurred during the critical period of middle childhood, when children typically move toward finding their own interests, become involved in expanding social networks, and seek independence from parents and families, all of which have the potential to contribute to internal and interpersonal tensions (Eccles, 1999; Ilari, 2018).

Music performance affording children agency within their families emerged as a significant finding, as playing the cello provided opportunities for children to be seen and see themselves in novel ways as capable, autonomous musical agents commanding parental attention, contributing to family members' emotional regulation, and mentoring siblings' musicianship. Growing capacities also occurred with participation in peer performance contexts, as children fostered musical friendships and experienced increasing pride and social capital in sharing musical skills to inspire and mobilize others to play music. Broadening school experiences contributed to the young musicians locating themselves within a more extensive, multi-aged community, connecting with different teachers and peers, and developing skills and interests beyond the teaching room—an experience perhaps unavailable to those learning in an external studio environment. Incentives to perform in future contexts were drawn from children's prior experiences and personal motivations. This was evidenced by Lily, whose altruistic desire to raise money for individuals experiencing homelessness was linked to formative music therapy experiences, and Olivia's motivations, which included the desire to reunite her divorced parents and overcome shyness. These nuanced ways in which children engage with music performance to facilitate change and development highlight music's value in children's social interactions as they grow and mature (Ilari, 2016; Young, 2016).

Our findings provide idiographic evidence of how children's performance experiences were influenced by self-perception. This resonates with extensive previous work drawing on self-theories, such as self-regulation (Leon-Guerrero, 2008; McPherson & Renwick, 2001; Zachariou & Whitebread, 2015; Zimmerman, 2011) and self-efficacy (Bandura, 1982; Hendricks et al., 2016; MacAfee & Comeau, 2020; McPherson & McCormick, 2006) and contributes to the field

by illustrating how performance nurtures personal development through experiences of pride, competency, autonomy, empowerment, and social connection.

The majority of children sustained overall positive valence during music performance experiences. Initially, three children felt negative valence in most environments; however, longitudinal data revealed improvements for the two who remained in the study. This supports previous literature indicating that although children may experience anxiety during initial performances, repeated affirming exposures can reduce stress (Boucher & Ryan, 2011). Our finding that children's management of arousal and valence during performance contributed to performance outcome qualities also confirms previous observations (Patston & Osborne, 2016), with stable self-efficacy identified as essential (McPherson & McCormick, 2006). Furthermore, when children's expectations aligned with perceived outcomes, they were more likely to reinvest in future performances (Osborne, 2015; Osborne & Kenny, 2008). The connection between children's matched performance expectations and outcomes, alongside their desire to increase future performance stakes, enhances an understanding of young musicians' motivation and interest development.

While the literature, particularly that concerning MPA, recognizes concert, ensemble, and practice settings as dominant performance environments (Nicholson et al., 2015), less is known about children's performative experiences in one-to-one lessons. However, Ryan et al.'s (2021) research suggests that adolescents may view lessons as a negative form of performance. Our findings indicate that middle-childhood learners perceive lessons as a performance environment. Although no students experienced persistent adverse MPA symptoms, lower levels of self-efficacy and self-regulation were evident in those who exhibited anxiety through frustration or off-task behavior. Social support from the teacher-researcher over 18 months helped remediate these characteristics and behaviors (Zarza-Alzugaray et al., 2020).

The implications of this study point to the teacher's critical role in listening to children's voices in musical development (Barrett & Smigiel, 2007; Griffin, 2009), supporting their perspectives of performance across all environments and guiding their experiences of arousal and valence. This includes selecting appropriate repertoire, assessing student readiness for incremental challenges within their zone of proximal development (Vygotsky, 1978), setting realistic goals (Zhukov, 2019), promoting enjoyment in playing in different contexts rather than focusing purely on assessment-based performance tasks (Kenny, 2011), and spending time discussing performance processes that incorporate supporting regard for audience. Such proactive performance training strategies can help learners develop favorable performance experiences (Patston & Osborne, 2016). These pedagogical approaches to cultivating young musicians' productive attitudes toward performance rely on sensitive, collaborative partnerships between teachers, students, and parents (González et al., 2017).

The connection between children's experiences of performance modes and stakes and their perceptions of anticipated audience feedback, feed-up, and feed-forward responses (McPherson et al., 2022) underscores the vital need for teachers to understand and not overlook the potential for children to undergo stress and perceive judgment while being observed as they learn to play their instrument. In lessons, teachers can pre-emptively direct student learning toward gaining personal rewards from musical expression, promoting creative engagement through skill development, and achieving flow (Csikszentmihalyi, 2014), rather than framing interactions in skill instruction and acquisition as performative experiences with associated evaluations and thereby avoiding entering cycles of responding to signs of learner hardship. This may be achieved through facilitative and empathetic teaching strategies within a collaborative, flexible pedagogical process that adapts to individual requirements (MacArthur et al., 2024b). Providing instruction and feedback free from negative criticism or disapproval may be one

practical step in this approach (Blackwell, 2020). Furthermore, teacher investment in building rapport with students and creating trustworthy learning environments (Clemmons, 2009) seems relevant. For example, forward-focusing Isabella for a high-stakes concert with her brother helped alleviate lesson-based performance difficulties. This strategy was informed by the teacher-researcher's well-established relationship with Isabella's family and an understanding of Isabella's desire to be seen by her parents as capable and autonomous in the school community setting.

This study was limited to a small sample of participants from middle-class Western backgrounds within a single school. Further research in diverse contexts is needed to understand children's complex perspectives of music performance. Findings on the children's arousal and valence valuably offer a basis for developing a pedagogical framework to support novice performers during early learning. More targeted research investigating children's experiences of stakes and modes within the four performance environments and links to personal development would be worth further investigation. Emphasizing children's lived experience, this study offers compelling insight into how music performance provides a productive, creative means for children to experience intrapersonal growth and autonomy during the pivotal period of seeking independence in middle childhood.

Author Contributions

S.L.R.M.: Conceptualization; Data curation; Formal analysis; Funding acquisition; Investigation; Methodology; Project administration; Resources; Visualization; Writing—original draft; Writing—review & editing. J.W.D.: Conceptualization; Formal analysis; Methodology; Project administration; Supervision; Validation; Visualization; Writing—review & editing. A.E.K.: Supervision; Validation; Visualization; Writing—review & editing.

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Supplemental material

Supplemental material for this article is available online.

References

Altenmüller, E., & Furuya, S. (2016). Planning and performance. In S. Hallam, I. Cross & M Thaut (Eds.), *The Oxford handbook of music psychology* (2nd ed., pp. 529–549). Oxford University Press.

Bakker, A. B. (2005). Flow among music teachers and their students: The crossover of peak experiences. *Journal of Vocational Behavior*, 66(1), 26–44. https://doi.org/10.1016/j.jvb.2003.11.001

Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, 37(2), 122–147.

Barrett, M. S. (2017). Policy and the lives of school-aged children. In P. Schmidt & R. Colwell (Eds.), *Policy and the political life of music education* (pp. 175–190). Oxford University Press. https://doi.org/10.1093/acprof:oso/9780190246143.003.0011

Barrett, M. S., Everett, M. C., & Smigiel, H. M. (2012). Meaning, value and engagement in the arts: Findings from a participatory investigation of young Australian children's perceptions of the arts. *International Journal of Early Childhood*, *44*, 185–201. https://doi.org/10.1007/s13158-012-0059-9

Barrett, M. S., & Smigiel, H. M. (2007). Children's perspectives of participation in music youth arts settings: Meaning, value and participation. *Research Studies in Music Education*, *28*(1), 39–50. https://doi.org/10.1177/1321103X070280010204

Blackwell, J. (2020). Expertise in applied studio teaching: Teachers working with multiple levels of learners. *International Journal of Music Education*, *38*(2), 283–298. https://doi.org/10.1177/0255761419898312

Boucher, H., & Ryan, C. A. (2011). Performance stress and the very young musician. *Journal of Research in Music Education*, *58*(4), 329–345. https://doi.org/10.1177/0022429410386965

Carnevale, F. A. (2020). A "thick" conception of children's voices: A hermeneutical framework for childhood research. *International Journal of Qualitative Methods*, *19*, 1609406920933767. https://doi.org/10.1177/1609406920933767

Clemmons, J. (2009). The importance of being earnest: Rapport in the applied studio. *College Music Symposium*, *49/50*, 257–264.

Cochran-Smith, M., & Lytle, S. L. (2015). *Inquiry as stance: Practitioner research for the next generation.* Teachers College Press.

Crawford, R. (2019). Using Interpretative Phenomenological Analysis in music education research: An authentic analysis system for investigating authentic learning and teaching practice. *International Journal of Music Education*, *37*(3), 454–475. https://doi.org/10.1177/0255761419830151

Csikszentmihalyi, M. (2014). Flow and education. In M. Csikszentmihalyi (Ed.), *Applications of flow in human development and education: The collected works of Mihaly Csikszentmihalyi* (pp. 129–151). Springer. https://doi.org/10.1007/978-94-017-9094-9_6

Custodero, L. A. (2002). Seeking challenge, finding skill: Flow experience and music education. *Arts Education Policy Review*, *103*(3), 3–9. https://doi.org/10.1080/10632910209600288

Custodero, L. A. (2011). The call to create: Flow experience in music learning and teaching. In D. Hargreaves, D. Miell & R. MacDonald (Eds.), *Musical imaginations* (pp. 369–384). Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199568086.003.0023

Dobos, B., Piko, B. F., & Kenny, D. T. (2019). Music performance anxiety and its relationship with social phobia and dimensions of perfectionism. *Research Studies in Music Education*, *41*(3), 310–326. https://doi.org/10.1177/1321103X18804295

Eatough, V., & Smith, J. A. (2017). Interpretative phenomenological analysis. In C. Willig & W. Stainton-Rogers (Eds.), *The SAGE handbook of qualitative research in psychology* (pp. 193–211). Sage. https://doi.org/10.4135/9781526405555

Eccles, J. S. (1999). The development of children ages 6 to 14. *The Future of Children*, *9*(2), 30–44. https://doi.org/10.2307/1602703

Freer, P. K. (2009). Boys' descriptions of their experiences in choral music. *Research Studies in Music Education*, *31*(2), 142–160. https://doi.org/10.1177/1321103X09344382

González, A., Blanco-Piñeiro, P., & Díaz-Pereira, M. P. (2017). Music performance anxiety: Exploring structural relations with self-efficacy, boost, and self-rated performance. *Psychology of Music*, *46*(6), 831–847. https://doi.org/10.1177/0305735617727822

Griffin, S. M. (2009). Listening to children's music perspectives: In- and out-of-school thoughts. *Research Studies in Music Education*, *31*(2), 161–177. https://doi.org/10.1177/1321103X09344383

Griffin, S. M. (2011). Through the eyes of children: Telling insights into music experiences. *Visions of Research in Music Education*, *19*(1), 3.

Hendricks, K. S., Smith, T. D., & Legutki, A. R. (2016). Competitive comparison in music: Influences upon self-efficacy beliefs by gender. *Gender and Education*, *28*(7), 918–934. https://doi.org/10.1080/09540253.2015.1107032

Ilari, B. (2016). Music in the early years: Pathways into the social world. *Research Studies in Music Education*, *38*(1), 23–39. https://doi.org/10.1177/1321103X16642631

Ilari, B. (2018). Musical parenting and music education: Integrating research and practice. *Update: Applications of Research in Music Education*, *36*(2), 45–52. https://doi.org/10.1177/8755123317717053

Juslin, P. N., & Timmers, R. (2010). Expression and communication of emotion in music performance. In P. N. Juslin & J. A. Sloboda (Eds.), *Handbook of music and emotion: Theory, research, applications* (pp. 453–489). Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199230143.003.0017

Kaleńska-Rodzaj, J. (2020). Pre-performance emotions and music performance anxiety beliefs in young musicians. *Research Studies in Music Education*, *42*(1), 77–93. https://doi.org/10.1177/1321103X19830098

Kemmis, S., McTaggart, R., & Nixon, R. (2014). *The action research planner: Doing critical participatory action research*. Springer.

Kenny, D. (2011). *The psychology of music performance anxiety*. Oxford University Press.

Lamont, A. (2012). Emotion, engagement and meaning in strong experiences of music performance. *Psychology of Music*, *40*(5), 574–594. https://doi.org/10.1177/0305735612448510

Leon-Guerrero, A. (2008). Self-regulation strategies used by student musicians during music practice. *Music Education Research*, *10*(1), 91–106. https://doi.org/10.1080/14613800701871439

MacAfee, E., & Comeau, G. (2020). Exploring music performance anxiety, self-efficacy, performance quality, and behavioural anxiety within a self-modelling intervention for young musicians. *Music Education Research*, *22*(4), 457–477. https://doi.org/10.1080/14613808.2020.1781074

MacArthur, S. L. R., Davidson, J. W., & Krause, A. E. (2024a). Interpreting seven-year-old beginner cellists' experiences of practice. *Research Studies in Music Education*, *46*(1), 114–133. https://doi.org/10.1177/1321103X231209717

MacArthur, S. L. R., Davidson, J. W., & Krause, A. E. (2024b). Uncovering children's experiences of emergent learning difficulties in the instrumental music studio. *International Journal of Music Education*. Advance online publication. https://doi.org/10.1177/02557614241287824

Marti-Marca, A., Nguyen, T., & Grahn, J. A. (2020). Keep calm and pump up the jams: How musical mood and arousal affect visual attention. *Music & Science*, *3*, 2059204320922737. https://doi.org/10.1177/2059204320922737

Maslow, A. H. (1968). Music education and peak experience. *Music Educators Journal*, *54*(6), 72–171.

McPherson, G. E., Blackwell, J., & Hattie, J. (2022). Feedback in music performance teaching. *Frontiers in Psychology*, *13*, Article 891025. https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.2022.891025

McPherson, G. E., & McCormick, J. (2006). Self-efficacy and music performance. *Psychology of Music*, *34*(3), 322–336. https://doi.org/10.1177/0305735606064841

McPherson, G. E., & Renwick, J. M. (2001). A longitudinal study of self-regulation in children's musical practice. *Music Education Research*, *3*(2), 169–186. https://doi.org/10.1080/14613800120089232

McPherson, G. E., & Zimmerman, B. J. (2011). Self-regulation of musical learning: A social cognitive perspective on developing performance skills. In R. Colwell & P. Webster (Eds.), *MENC handbook of research on music learning: Volume 2: Applications* (pp. 130–175). Oxford University Press. https://doi.org/10.1093/acprof:osobl/9780199754397.003.0004

Nicholson, D. R., Cody, M. W., & Beck, J. G. (2015). Anxiety in musicians: On and off stage. *Psychology of Music*, *43*(3), 438–449. https://doi.org/10.1177/0305735614540018

Nielsen, C., Studer, R. K., Hildebrandt, H., Nater, U. M., Wild, P., Danuser, B., & Gomez, P. (2018). The relationship between music performance anxiety, subjective performance quality and post-event rumination among music students. *Psychology of Music*, *46*(1), 136–152. https://doi.org/10.1177/0305735617706539

Osborne, M. S. (2015). Building performance confidence. In G. McPherson (Ed.), *The child as musician: A handbook of musical development* (2nd ed., pp. 422–440). Oxford University Press. https://doi.org/10.1093/acprof:oso/9780198744443.003.0023

Osborne, M. S., & Kenny, D. T. (2005). Development and validation of a music performance anxiety inventory for gifted adolescent musicians. *Journal of Anxiety Disorders*, *19*(7), 725–751. https://doi.org/10.1016/j.janxdis.2004.09.002

Osborne, M. S., & Kenny, D. T. (2008). The role of sensitizing experiences in music performance anxiety in adolescent musicians. *Psychology of Music*, *36*(4), 447–462. https://doi.org/10.1177/0305735607086051

Papageorgi, I., Creech, A., & Welch, G. (2013). Perceived performance anxiety in advanced musicians specializing in different musical genres. *Psychology of Music*, *41*(1), 18–41. https://doi.org/10.1177/0305735611408995

Papageorgi, I., & Kopiez, R. (2018). Psychological and physiological aspects of learning to perform. In G. McPherson & G. F. Welch (Eds.), *Vocal, instrumental, and ensemble learning and teaching: An Oxford handbook of music education* (*Vol. 3*, pp. 184–208). Oxford University Press.

Patston, T., & Osborne, M. S. (2016). The developmental features of music performance anxiety and perfectionism in school age music students. *SI:Performing Arts*, *4*(1), 42–49. https://doi.org/10.1016/j.peh.2015.09.003

Peistaraite, U., & Clark, T. (2020). Emotion regulation processes can benefit self-regulated learning in classical musicians. *Frontiers in Psychology*, *11*, Article 568760. https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.2020.568760

Ramón, L. N., & Chacón-López, H. (2021). The impact of musical improvisation on children's creative thinking. *Thinking Skills and Creativity*, *40*, 100839. https://doi.org/10.1016/j.tsc.2021.100839

Rickard, N. S., Appelman, P., James, R., Murphy, F., Gill, A., & Bambrick, C. (2013). Orchestrating life skills: The effect of increased school-based music classes on children's social competence and self-esteem. *International Journal of Music Education*, *31*(3), 292–309. https://doi.org/10.1177/0255761411434824

Ritchie, L., & Williamon, A. (2012). Self-efficacy as a predictor of musical performance quality. *Psychology of Aesthetics, Creativity, and the Arts*, *6*(4), 334–340. https://doi.org/10.1037/a0029619

Rucsanda, M. D., Cazan, A.-M., & Tru a, C. (2020). Musical performance and emotions in children: The case of musical competitions. *Psychology of Music*, *48*(4), 480–494. https://doi.org/10.1177/0305735618810791

Russell, J. A. (1980). A circumplex model of affect. *Journal of Personality and Social Psychology*, *39*(6), 1161–1178. https://doi.org/10.1037/h0077714

Ryan, C. (2004). Gender differences in children's experience of musical performance anxiety. *Psychology of Music*, *32*(1), 89–103. https://doi.org/10.1177/0305735604039284

Ryan, C., Boucher, H., & Ryan, G. (2021). Performance preparation, anxiety, and the teacher. Experiences of adolescent pianists. *Revue musicale OICRM*, *8*(1), 38–62. https://doi.org/10.7202/1079790ar

Ryan, C., Boucher, H., & Ryan, G. (2022). Children's feelings about piano performances across a year of study. *International Journal of Music Education*, *40*(3), 392–406. https://doi.org/10.1177/02557614211066342

Sieger, C. (2017). Music performance anxiety in instrumental music students. *Contributions to Music Education*, *42*, 35–52.

Sloboda, J. A., & Juslin, P. N. (2001). Psychological perspectives on music and emotion. In P. N. Juslin & J. A. Sloboda (Eds.), *Music and emotion: Theory and research* (pp. 71–104). Oxford University Press.

Smith, J. A. (2011). "We could be diving for pearls": The value of the gem in experiential qualitative psychology. *Qualitative Methods in Psychology Bulletin*, *12*, 6–15.

Smith, J. A., Larkin, M., & Flowers, P. (2009). *Interpretative phenomenological analysis: Theory, method and research*. Sage.

Stavrou, N. E., & Papageorgi, I. (2021). 'Turn up the volume and listen to my voice': Students' perceptions of Music in school. *Research Studies in Music Education*, *43*(3), 366–385. https://doi.org/10.1177/1321103X20929709

Stoeber, J., & Eismann, U. (2007). Perfectionism in young musicians: Relations with motivation, effort, achievement, and distress. *Personality and Individual Differences*, *43*(8), 2182–2192. https://doi.org/10.1016/j.paid.2007.06.036

Sutherland, A. T., & Southcott, J. (2021). Fluctuating emotions and motivation: Five stages of the rehearsal and performance process. *International Journal of Music Education*, *39*(1), 3–17. https://doi.org/10.1177/0255761420963984

van Manen, M. (1990). *Researching lived experience: Human science for an action sensitive pedagogy*. State University of New York Press.

Vervainioti, A., & Alexopoulos, E. (2015). Job-related stressors of classical instrumental musicians: A systematic qualitative review. *Medical Problems of Performing Artists*, *30*(4), 197–202. https://doi.org/10.21091/mppa.2015.4037

Vygotsky, L. S. (1978). *Mind in society*. Harvard University Press. https://doi.org/10.2307/j.ctvjf9vz4

Welch, G. F., Himonides, E., Saunders, J., Papageorgi, I., & Sarazin, M. (2014). Singing and social inclusion. *Frontiers in Psychology*, 5, Article 803. https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.2014.00803

Yardley, L. (2000). Dilemmas in qualitative health research. *Psychology & Health*, *15*(2), 215–228. https://doi.org/10.1080/08870440008400302

Yardley, L. (2016). Demonstrating the validity of qualitative research. *The Journal of Positive Psychology*, *12*(3), 295–296. https://doi.org/10.1080/17439760.2016.1262624

Young, S. (2016). Musical childhoods. In S. Young & B. Ilari (Eds.), *Children's home musical experiences across the world* (pp. 29–42). Indiana University Press. https://doi.org/10.2307/j.ctt2005s41.5

Zachariou, A., & Whitebread, D. (2015). Musical play and self-regulation: Does musical play allow for the emergence of self-regulatory behaviours? *International Journal of Play*, *4*(2), 116–135. https://doi.org/10.1080/21594937.2015.1060572

Zarza-Alzugaray, F. J., Casanova, O., McPherson, G. E., & Orejudo, S. (2020). Music self-efficacy for performance: An explanatory model based on social support. *Frontiers in Psychology*, *11*, Article 1249. https://www.frontiersin.org/articles/10.3389/fpsyg.2020.01249

Zatorre, R. J., Chen, J. L., & Penhune, V. B. (2007). When the brain plays music: Auditory–motor interactions in music perception and production. *Nature Reviews Neuroscience*, *8*(7), 547–558. https://doi.org/10.1038/nrn2152

Zhukov, K. (2019). Current approaches for management of music performance anxiety: An introductory overview. *Medical Problems of Performing Artists*, *34*(1), 53–60.

Zimmerman, B. (2011). *Handbook of self-regulation of learning and performance*. Routledge.

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