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McNeil, D. G., Loi, N. M., & Bullen, R. (2022). Investigating the moderating role of coping style on music performance anxiety and perfectionism. *International Journal of Music Education*, 40(4), 587–597.

The online version of this article can be found at:

<https://doi.org/10.1177/02557614221080523>

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Investigating the Moderating Role of Coping Style on Music Performance Anxiety and Perfectionism

Journal:	<i>International Journal of Music Education</i>
Manuscript ID	IJME-RS-21-0128.R1
Manuscript Type:	Original Article
Keywords:	Music Performance Anxiety, Coping, Perfectionism, Performance, Musicians
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Investigating the Moderating Role of Coping Style on Music Performance Anxiety and Perfectionism

Abstract

Classical musicians are under constant pressure to perform at near perfect levels, and are highly vulnerable to the negative effects of music performance anxiety. This study aimed to examine the mechanisms by which two types of perfectionism (personal standards and evaluative concerns) relate to music performance anxiety, and to explore the moderating roles of active and avoidant coping on the relationship between these perfectionism types and music performance anxiety. A sample of 118 classical performing musicians (35 males, 82 females, 1 other; $M_{age} = 42.00$, $SD = 14.68$) were recruited to participate in an anonymous online questionnaire assessing music performance anxiety, coping and perfectionism. Results indicated that the two dimensions of perfectionism were positively associated with music performance anxiety. Personal standards perfectionism was associated with active coping, and evaluative concerns perfectionism with avoidant coping. Active coping moderated the relationship between personal standards perfectionism and performance anxiety, but only at high and medium levels. Contrary to the prediction, avoidant coping did not moderate the relationship between evaluative concerns perfectionism and performance anxiety. These findings highlight key relationships between music performance anxiety and the interaction of personal standards perfectionism and active coping.

Key words: Music Performance Anxiety; Coping; Perfectionism; Performance; Professional Musicians

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High level music performance requires diverse skills and there are a number of factors that can influence performance quality. For example, the nature and importance of the performance (i.e., public vs. private performance; high level recital or competition vs. rehearsal) can increase the perception of pressure or expectations on performers (e.g., Perkins et al., 2017). The heightened evaluation of the situation can lead to performers experiencing greater levels of music performance anxiety (MPA; Fehm & Schmidt, 2006; Steptoe, 2001; Studer et al., 2011). Kenny (2009, p. 433) defined MPA as “the experience of marked and persistent anxious apprehension related to musical performance that has arisen through specific anxiety conditioning experiences and which is manifested through combinations of affective, cognitive, somatic and behavioural symptoms”. For those negatively affected, MPA also has the potential to affect performance quality, enjoyment while performing, and career satisfaction (Mor et al., 1995).

MPA has been reported to affect musicians of all genres, ages, levels of preparation, and experience (e.g., Cox & Kenardy, 1993; Kenny, 2009), so much so that anxiety about performing music is commonly considered to be normal and expected (Patston & Loughlan, 2014). Fishbein et al. (1988) found that 24% of the professional musicians surveyed in their study referred to MPA as a problem, and 16% considered it a severe problem. Rather than being an all-or-nothing experience, MPA can manifest in different musicians to differing degrees depending on the occasion (Steptoe, 2001). Consequently, it is important to understand why some musicians are more affected by MPA than others, the degree to which musicians experience MPA, and the factors that contribute to MPA.

Research examining MPA has predominantly focused on the impact of physiological symptoms (e.g., elevated heartrate, perspiration, trembling), as these symptoms can directly affect

performance quality through its effect on the musician’s ability to control their instrument (Kenny, 2011). Yet, somatic physiological symptoms associated with MPA may be considered normal and facilitative (Matei & Ginsborg, 2017). Consequently, it is important that research focuses on the cognitive (i.e., psychological) factors that may influence the MPA experienced.

One factor identified as affecting MPA is perfectionism (Kenny et al., 2004; Patston & Osborne, 2016). Perfectionism is conceptualised as a multidimensional personal disposition characterised by striving for flawlessness, setting high standards for performance, and the highly critical evaluation of one's behaviour (Flett & Hewitt, 2002). Research has found that with respect to musicians, some of the dimensions have been found to be adaptive and others maladaptive (Stoeber & Eismann, 2007). Adaptive dimensions are associated with problem-focused coping, striving, and achievement, whereas maladaptive dimensions are associated with avoidant coping and higher MPA (Stoeber & Eismann, 2007; Stoeber & Otto, 2006). Personal standards perfectionism (PSP; Frost et al., 1990) involves striving for excellence and setting high standards and goals for oneself. It is associated with conscientiousness (Stumpf & Parker, 2000) and is not necessarily maladaptive. On the other hand, evaluative concerns perfectionism (ECP) involves chronic concern about criticism and expectations from others as well as an overly critical evaluation of one's behaviour (Frost et al., 1990). Rather than forming two poles of a continuum, these two core dimensions of perfectionism are distinct, independent factors that can be present in varying degrees in the same individual (Stumpf & Parker, 2000).

In a study of mixed professional performing artists (musicians, actors, and dancers), PSP and ECP were associated with higher performance anxiety (Mor et al., 1995). Furthermore, PSP has been linked to higher effort and higher achievement in young musicians (Kobori et al., 2011; Stoeber & Eismann, 2007). Identifying differences in perfectionism is important as different dimensions may facilitate differing relationships to other psychological factors that may prevent

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MPA.

Coping, for example, is an additional construct that influences MPA, but is also associated with perfectionism dimensions (e.g., Biasutti & Concina, 2014; Kobori et al., 2011). Lazarus and Folkman (1984, p. 141) define coping as “constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person”. While many different coping strategies exist to handle stressful situations, a continuum of higher order coping styles have been identified ranging from active (e.g., planning, suppression of competing activities) to avoidant (e.g., withdrawal, giving up, distraction; Endler & Parker, 1994).

Many short-term and long-term adaptive (i.e., increased practice) and maladaptive coping strategies (i.e., use of pharmaceuticals, anxiety) are commonly employed by musicians to control or cope with MPA (Poczwardowski & Conroy, 2002). While coping is an essential and inherent part of musicians’ performing craft, it is important to identify coping strategies that are effective for reducing MPA. Langendörfer et al. (2006) and Lehrer et al. (1990) both found relationships between MPA and adaptive and maladaptive coping strategies. Interestingly, Kobori et al. (2011) found that reduced performance anxiety was associated with task- and emotion-oriented coping methods linked with an active coping method approach. Musicians who use more avoidant coping strategies such as emotion-based and/or less task-based coping generally experience higher MPA (Biasutti & Concina, 2014; Sinden, 1999). Considering the infrequency of catastrophes on stage, it does appear that, overall, musicians are able to cope with MPA (Kenny, 2011), however, greater research is needed to understand how dimensions of perfectionism and coping may interact with MPA.

Researchers have found an association between PSP and task-based, active coping styles (Kobori et al., 2011; Stoeber & Otto, 2006; Weiner & Carton, 2012). That is, individual with high

PSP might experience an increase in anxiety as a result of striving for perfection, but this negative impact may be offset by the tendency to engage in active, problem-focused coping (Dunkley et al., 2003; Gnilka et al., 2012). There is no evidence, however, that adaptive coping moderates the relationship between adaptive perfectionism and anxiety (Dunkley et al., 2003; Gnilka et al., 2012). Alternatively, if an individual has an excessive need for perfectionism in their performance, and also engages in avoidant coping, it is possible that this may be associated with higher MPA.

Evidence for a positive association between ECP and maladaptive coping styles has previously been found (e.g., Gnilka et al., 2012; Weiner & Carton, 2012), with individuals high on ECP being more likely to engage in avoidance coping and less likely to engage in problem-focused coping (Dunkley et al., 2003). There is additional evidence that avoidant coping moderates the relationship between ECP and distress (O'Connor & O'Connor, 2003). While these findings theoretically support the interaction of perfectionism dimensions and coping style on MPA in musicians, greater research is needed to investigate whether adaptive and maladaptive outcomes exist.

It is important to understand how perfectionism and coping style influence MPA in high level classical performing musicians. This study, therefore, aims to understand how perfectionism and coping styles influence MPA in this population. Based on the previous findings (Stoeber & Otto, 2006; Weiner & Carton, 2012), it was hypothesised that PSP would be positively associated with MPA and active coping. We also hypothesised that ECP would be positively associated with MPA and avoidant coping, based upon the research of Gnilka et al. (2012) and Weiner and Carton (2012). Further, it was hypothesised that the relationship between PSP and MPA would be moderated by active coping. Finally, it was hypothesised that the relationship between ECP and MPA would be moderated by avoidant coping.

Method

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Participants

Potential participants were targeted from the social media pages of various musical societies and higher education music programs associated with a wide range of instruments (e.g., woodwind, double reed, strings, percussion). Of the initial 223 participants who agreed to participate, 37 were prevented from completing the study as they answered "no" to the question, "Are you a classical performing musician?". A further 68 participants were eliminated from the sample as they did not self-identify as being either an expert or advanced performer, or did not complete all components of the survey. A final cohort of 118 musicians (35 males, 82 females, 1 who identified as other) took part in this study. The mean age was 42 years ($SD = 14.68$; age range = 18-76 years). The mean number of years spent musical training was 17.30 ($SD = 6.73$; range: 3-25 years). Of the sample collected, 28 (23.7%) performers self-reported being of advanced level, and 90 (76.3%) participants self-reported being expert or professional.

Measures

An online study questionnaire was used to collect data from a sample of classical performing musicians on variables relating to MPA, perfectionism, and coping. The questionnaire took an average of 12 minutes to complete.

Demographic Questionnaire. Participants were asked to provide information on gender, age, and characteristics relating to music performance. Along with the question, "Are you a classical musician – Yes/No", participants were also asked to self-select "What is your level of expertise" with responses being: beginner, advanced or expert. Participants were also asked, "Please indicate your years of musical training" to which they could provide the number of years.

Performance Anxiety Inventory for Musicians (PerfAIM; Barbeau, 2011, 2017). The PerfAIM is a self-report measure that contains 44 items used for scoring and an additional two short answer questions that were omitted for this study. Participants rated each item on a 5-point

Likert scale from 0 (*not at all*) to 4 (*greatly*), with higher scores indicating higher MPA. An example item is, "I have difficulty concentrating when I am performing". This measured showed excellent reliability with this sample ($\alpha = .97$) and has shown good test-retest reliability, as well as good convergent and divergent validity (Barbeau & Mantie, 2019).

Frost Multidimensional Perfectionism Scale (FMPS; Frost et al., 1990). The FMPS is a scale that measures six dimensions of perfectionism: personal standards, parental expectations, parental criticism, concern over mistakes, doubts about actions, and organisation. Similar to previous research (Dunkley et al., 2000; Weiner & Carton, 2012), the current study used three of the FMPS subscales to measure the two dimensions that best represent the two core forms of perfectionism being investigated. The personal standards subscale (7 items) was used to measure the dimension of PSP and showed adequate scale reliability ($\alpha = .79$). Two subscales, concern over mistakes (9 items) and doubts about actions (4 items), were combined to measure ECP and showed excellent reliability ($\alpha = .91$). Items were rated on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), therefore higher scores indicate higher levels of perfectionism. An example item is, "If I fail partly, it is as bad as being a complete failure".

The COPE Inventory (Carver et al., 1989). The COPE Inventory measures a diverse range of coping strategies used to respond to stressful situations. Participants rate how often they use each strategy on a 4-point Likert scale, ranging from 1 (*I usually don't do this at all*) to 4 (*I usually do this a lot*). Previous research has indicated that two of the subscales measure active coping (active coping and planning), and three of the subscales measure avoidant coping (mental disengagement, denial, and behavioural disengagement; Dunkley et al., 2014). Consequently, only those five subscales were included in the analysis. An example of an active coping item is "I do what has to be done, one step at a time" and an example of avoidant coping is, "I admit to myself that I can't deal with it, and quit trying". Similar to previous research (e.g., Weiner & Carton,

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2012), active coping ($\alpha = .88$) and avoidant coping ($\alpha = .77$) showed good reliability.

Procedure

Ethics for the study was approved from a Human Research Ethics Committee (Approval No. HE18-112). Participants were recruited through advertisements targeting classical performing musicians. The advertisements were placed on social media groups for musicians (e.g., *Australasian Double Reed Society, Melbourne Orchestras*), higher education music programs (e.g., Sir Zelman Cowen School of Music, Monash University), and provided to the researcher's private contacts via email and social media.

Participation provided implied consent to participate in the study before completing the questionnaires. At the conclusion of the survey, participants were thanked for their involvement and invited to enter a prize draw to win one of six iTunes vouchers with a value of AUD\$25 each.

Results

Data were analysed using SPSS v. 25. Assumption tests were run for all analyses with no major violations detected.

Bivariate Correlation Analyses

In order to assess the relationships between the main study variables, bivariate Pearson's correlation coefficients were calculated. The results are presented in Table 1 along with the means, standard deviations, and score ranges for each variable. As hypothesised, PSP was positively correlated with MPA and active coping. Likewise, and in support of the second hypothesis, ECP was positively correlated with MPA and avoidant coping. These findings are consistent with previous research (e.g., Dunkley et al., 2003).

Table 1
Correlations, Means, Standard Deviations, and Score Ranges between the Main Study Variables (N = 118)

	1	2	3	4	5	6	7	8	9
1. Gender	-								
2. Age	.12	-							
3. Years of training	.18	.11	-						
4. Level of expertise	-.13	.14	.29**	-					
5. MPA	.10	-.20*	.20*	.01	-				
6. PSP	.19*	-.07	.18	.07	.22*	-			
7. ECP	.14	-.22*	.14	.07	.64***	.44***	-		
8. Active coping	.19*	.02	.04	-.02	.11	.28**	.03	-	
9. Avoidant coping	-.01	-.21*	.04	.08	.45***	.11	.42***	-.11	-
M	-	42.00	17.30	-	74.35	27.22	18.88	22.98	26.77
SD	-	14.68	6.73	-	34.40	4.71	6.09	4.88	5.97
Score range	-	18-100	3-25	-	13-155	13-35	6.5-32.5	10-32	16-52

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

MPA = Music performance anxiety; PSP = Personal standards perfectionism; ECP = Evaluative concerns perfectionism

Moderation Analysis: Active Coping

A multiple regression moderation analysis was conducted using the Hayes (2017) PROCESS macro model 1 for SPSS to assess if active coping moderated the relationship between PSP and MPA. The moderation model accounted for significant unique variance in musicians' reported performance anxiety, $R^2 = .11$, $F(3, 114) = 4.10$, $p = .008$. The interaction term accounted for a significant 5.5% of the variance in performance anxiety, $F(1, 114) = 4.09$, $p = .046$. The results of the simple slopes analysis (see Figure 1) suggested that when levels of active coping are

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high ($B = 3.79$, $CI[1.49, 6.08]$, $p < .01$), there is a stronger positive relationship between PSP and MPA than at the mean level ($B = 1.75$, $CI[.29, 3.22]$, $p = .020$). When levels of active coping are low, however, PSP has no effect on individuals' experience of MPA ($B = .05$, $CI[-2.32, 2.43]$, $p = .965$).

INSERT FIGURE 1 AROUND HERE

The results of the moderation analysis are presented in Table 2.

Table 2

Moderation Model Coefficients for Personal Standards Perfectionism Predicting Music Performance Anxiety Conditional on Active Coping

Variable	b [LLCI, ULCI]	SE
PSP	-6.06 [-14.07, 1.94]	4.04
Active coping	-9.20 [-18.55, .16]	4.72
PSP*Active coping	0.34 [.01, .67]*	0.17

Note. * $p < .05$. Unstandardized coefficients are reported.

LLCI = Lower level confidence interval; ULCI = Upper level confidence interval; PSP = Personal standards perfectionism

Moderation Analysis: Avoidant Coping

A second moderation analysis assessed whether avoidant coping moderated the relationship between ECP and MPA. The moderation model accounted for significant unique variance in musicians' reported performance anxiety, $R^2 = .46$, $F(3, 114) = 46.49$, $p < .0001$. The interaction term, however, was nonsignificant, $F(1, 114) = 3.11$, $p = .081$. As can be seen in Table 3, though, both ECP and the use of an avoidant coping strategy were significantly related to an

increase in MPA.

Table 3

Moderation Model Coefficients for Evaluative Concerns Perfectionism Predicting Music Performance Anxiety Conditional on Avoidant Coping

Variable	<i>b</i> [LLCI, ULCI]	<i>SE</i>
ECP	5.18 [2.87, 7.49]***	1.17
Avoidant coping	2.93 [.58, 5.28]*	1.19
ECP*Avoidant coping	-0.08 [-.17, .01]	0.04

Note. * $p < .05$, *** $p < .001$. Unstandardized coefficients are reported.
ECP = Evaluative concerns perfectionism

Discussion

This study examined perfectionism and coping styles in musicians and their relationship with MPA. Both PSP and ECP were associated with MPA, but differed in how they related to musicians’ coping mechanisms. A small positive relationship was found between PSP and MPA, potentially illustrating that setting higher personal standards is associated with more anxiety about performing. PSP has previously been considered a positive dimension of perfectionism, yet the current positive relationship between PSP and MPA contradicts previous research that has illustrated no relationship between these variables (Sinden, 1999; Stoeber & Eismann, 2007). This finding potentially supports the claim that the relationship between a performer’s expectation of their performance and demand for high quality of performance can lead to increased levels of MPA. A strong association between ECP and MPA highlights that evaluative concerns and doubts about actions contributes to experiencing MPA as performers develop anxiety as the importance of

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the event increases (Kenny et al., 2014). This link between ECP and MPA has been established in previous studies, where socially prescribed perfectionism (i.e., self-orientated pressures deriving from other people) is related to MPA (Kobori et al., 2011; Mor et al., 1995). These findings demonstrate that both PSP and ECP dimensions are important traits in the context of MPA.

The findings of this study also identified key differences between the dimensions of perfectionism and coping. As predicted, PSP was associated with active coping, suggesting that musicians with higher PSP are more likely to engage in task-oriented coping and work towards their performance goals. Consistent with previous research, high personal standards are associated with active coping and increased effort (Kobori et al., 2011; Stoeber & Eismann, 2007). No relationship was found between active coping and MPA. Consequently, active coping appears to be adaptive in regards to producing MPA.

Support was also found for the hypothesis that ECP would have a positive association with avoidant coping. This adds to the body of research demonstrating the connection between evaluative concerns and avoidant coping (Kobori et al., 2011). This finding potentially suggests that musicians who fear mistakes and negative evaluation are more likely to use distraction and denial to cope with their concerns. Furthermore, avoidant coping was associated with higher levels of MPA, indicating that avoidant coping strategies are not adaptive for reducing or eliminating MPA in musicians.

Findings from the moderation analysis indicated that people with high PSP tended to experience greater MPA, and consequently, utilising high and medium levels of active coping does not help facilitate improvements to MPA. It was expected that PSP and task-based, active coping styles may interact to reduce the negative impact of anxiety experienced by performers (Dunkley et al., 2003; Gniska et al., 2012). Yet, these findings illustrate that those who actively attempt to improve their MPA with high or medium active coping mechanisms increased the level

of anxiety experienced. While not expected, the negative relationship between PSP and active coping to MPA makes conceptual sense. High PSP performers who initiate active coping mechanisms in order to maintain or strive for excellence through high standards or goals (Frost et al., 1990), may find the challenge or expectations within the task difficult. This may exacerbate MPA rather than prevent or alleviate their anxiety. Consequently, the specific approaches used to rectify potential issues in fact facilitate greater anxiety levels because performers worry about the situation and their inefficiencies more than if they avoided the situation.

The current study also predicted that individuals with high ECP, and who engaged in avoidance coping, would be more likely to reduce experienced MPA. Flett et al. (1996) proposed that socially prescribed perfectionists tend to react to stressful situations with a helpless or hopeless orientation (i.e., the sense that it is impossible to ever reach the standards of perfectionism imposed by others), making them less likely to actively focus on problem-solving. In addition, Gnilka et al. (2012) identified that avoidant coping mediates the relationship between ECP and anxiety. While these studies did not focus on MPA specifically, it was expected that ECP would interact with avoidant coping mechanisms to reduce the MPA experienced by performers. In contrast, this study found that there was no moderating relationship between avoidant coping and ECP on MPA. This lack of interaction suggests that avoidant coping may not be useful in attenuating MPA when people are high in ECP.

The positive association between the two types of perfectionism and MPA indicates that it is unlikely musicians will experience the benefits of perfectionism without the negative effects. Yet, working with musicians to decrease critical self-evaluation tendencies could be important in reducing MPA. It is possible that learning to reframe negative reactions to perceived failures as learning opportunities may help to lessen the impact of perfectionism. Research in this area has focused on interventions for MPA; however, identifying key moments where MPA is most likely

to have a negative impact on a musician's career could inform and maximise the effects of interventions.

Limitations and Future Directions

While the findings of this study are correlational and must be interpreted with caution, it is clear that perfectionism is an important factor to consider as part of a musician's education and any interventions implemented for MPA. These results, however, need to be considered in light of the potential limitations. A possible limitation of the study is the development of the composite coping variables. This study utilised Dunkley and Blankstein's (2000) approach of using composite dimensions to identify active and avoidant coping. It is possible that this approach did not accurately reflect the two coping styles, or that the coping measure did not reflect the coping style utilised by the performing artists. Poczwardowski and Conroy (2002) discuss the fact that coping strategies may differ between populations. It is possible, therefore, that coping measures are needed that more accurately reflect the strategies used by performing artists to better understand the contributing mechanisms of important psychological variables. Future researchers may wish to consider research designs that incorporate targeted measures of coping strategies used by performing artists more specifically.

Another limitation of this study is that the data were collected via self-report measures and may be vulnerable to bias (Meltzoff & Cooper, 2018). It is possible that musicians suffering adverse effects from MPA may be more motivated to participate in studies such as this in the hope of finding solutions. Additionally, given that participants self-selected as advanced or expert musicians, and that there was no objective measure of their status, there is a possibility that these participants exaggerated their capacity as advanced performers. Finally, this study focused specifically on classical musicians as previous research has suggested the experience of MPA differs between genres (Barbeau, 2017; Kenny, 2011). However, information pertaining to either

the type of performing participants engage in or about the type of instruments played was not collected. Differences in MPA have been found between players of different instruments (Kenny, 2011), and this information may have explained some of the variance. Greater research is needed to determine whether different factors such as instrumental differences or performance settings alter these relationships. In addition, future research may wish to examine whether the interaction between types of perfectionism and coping strategies differs as a result of musician experience (e.g., student vs. professional ensemble vs. professional soloists).

Conclusion

The current study aimed to understand how perfectionism and coping styles influence music performance anxiety in a sample of self-identified high-level performing musicians. The results support the relationships of personal standards perfectionism and evaluative concerns perfectionism to music performance anxiety and their association with active and avoidant coping styles. While it was proposed that active coping strategies would be beneficial for individuals high in personal standard perfectionism and, likewise, that avoidant coping strategies would assist those high in evaluative concerns perfectionism, the results instead highlight the role that perfectionism plays in music performance anxiety and emphasises the lack of coping strategies that exist to assist in these processes. Although the findings of this cross-sectional study must be interpreted cautiously, reducing fear of mistakes and self-critical evaluations as well as identifying coping strategies that may assist in reducing music performance anxiety is paramount for musicians.

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Investigating the Moderating Role of Coping Style on Music Performance Anxiety and Perfectionism

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Abstract

Classical musicians are under constant pressure to perform at near perfect levels, and are highly vulnerable to the negative effects of music performance anxiety. This study aimed to examine the mechanisms by which two types of perfectionism (personal standards and evaluative concerns) relate to music performance anxiety, and to explore the moderating roles of active and avoidant coping on the relationship between these perfectionism types and music performance anxiety. A sample of 118 classical performing musicians (35 males, 82 females, 1 other; $M_{age} = 42.00$, $SD = 14.68$) were recruited to participate in an anonymous online questionnaire assessing music performance anxiety, coping and perfectionism. Results indicated that the two dimensions of perfectionism were positively associated with music performance anxiety. Personal standards perfectionism was associated with active coping, and evaluative concerns perfectionism with avoidant coping. Active coping moderated the relationship between personal standards perfectionism and performance anxiety, but only at high and medium levels. Contrary to the prediction, avoidant coping did not moderate the relationship between evaluative concerns perfectionism and performance anxiety. These findings suggest that highlight key relationships between music performance anxiety and the interaction of personal standards perfectionism and active coping. strategies are needed to reduce the negative influence of perfectionism and music performance anxiety.

Key words: Music Performance Anxiety; Coping; Perfectionism; Performance; Professional Musicians

Investigating the Moderating Role of Coping Style on Music Performance Anxiety and Perfectionism

High level music performance requires diverse skills ~~ranging from fine motor dexterity, breath control, and coordination, as well as attention, memory, and interpretive skills. Years of training and dedication are needed to master a musical instrument to a level where performers are able to produce music that challenges their physical, technical, and artistic mastery. These skills are honed through hours of solitary practice and constant self-evaluation which continue for the duration of a musician's career (Kenny, 2011). Yet, while musicians may have the ability to perform successfully, and~~ there are a number of factors that can influence performance quality. For example, the ~~context of the performance, such as the~~ nature and importance of the performance (i.e., public vs. private performance; high level recital or competition vs. rehearsal; ~~esteem of the audience~~); can increase the perception of pressure or expectations on performers (e.g., Perkins et al., 2017) ~~which subsequently affect the quality of the performance~~. The heightened evaluation of the situation can lead to performers experiencing greater levels of music performance anxiety (MPA; Fehm & Schmidt, 2006; Steptoe, 2001; Studer, ~~Gomez, Hildebrandt, Arial, & Danuser et al., 2011~~).

Kenny (2009, p. 433) defined MPA as “the experience of marked and persistent anxious apprehension related to musical performance that has arisen through specific anxiety conditioning experiences and which is manifested through combinations of affective, cognitive, somatic and behavioural symptoms”. For those negatively affected, MPA also has the potential to affect performance quality, enjoyment while performing, and career satisfaction (Mor, ~~Day, Flett, & Hewitt et al., 1995~~).

MPA has been reported to affect musicians of all genres, ages, levels of preparation, and experience (e.g., Cox & Kenardy, 1993; Kenny, 2009; ~~Wolfe, 1989~~), so much so that anxiety

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about performing music is commonly considered to be normal and expected (Patston & Loughlan, 2014). Fishbein, ~~Middlestadt, Ottati, Straus, and Ellis~~ et al. (1988) found that 24% of the professional musicians surveyed in their study referred to MPA as a problem, and 16% considered it a severe problem. Rather than being an all-or-nothing experience, MPA can manifest in different musicians to differing degrees depending on the occasion (Steptoe, 2001). ~~These findings demonstrate that there is potential for MPA to affect performances that are important to the performer.~~ Consequently, it is important to understand why some musicians are more affected by MPA than others, the degree to which musicians experience MPA, and the factors that contribute to MPA.

Research examining MPA has predominantly focused on the impact of physiological symptoms (e.g., elevated heartrate, perspiration, trembling, ~~visual blurring~~), as these symptoms can directly affect performance quality through its effect on the musician's ability to control their instrument (Kenny, 2011). ~~For example, changes in breathing rate in wind players can directly affect how long they can play a phrase (Wolfe, 1989).~~ Yet, somatic physiological symptoms associated with MPA may be considered normal and facilitative (Matei & Ginsborg, 2017) ~~or have little negative effect on performance (Yoshie et al., 2009).~~ Consequently, it is important that research focuses on the cognitive (i.e., psychological) factors that may influence the MPA experienced.

One factor ~~that has been~~ identified as affecting MPA is perfectionism (Kenny, ~~Davis, & Oates~~ et al., 2004; Patston & Osborne, 2016). Perfectionism is conceptualised as a multidimensional personal disposition characterised by striving for flawlessness, setting high standards for performance, and the highly critical evaluation of one's behaviour (Flett & Hewitt, 2002). Research has found that ~~perfectionism is a multidimensional concept (Flett & Hewitt, 2002; Frost, Marten, Lahart, & Rosenblate, 1990), and~~ with respect to musicians, some of the

dimensions have been found to be adaptive and others maladaptive (Stoeber & Eismann, 2007). Adaptive dimensions are associated with problem-focused coping, striving, and achievement, whereas maladaptive dimensions are associated with avoidant coping and higher MPA (Stoeber & Eismann, 2007; Stoeber & Otto, 2006). Personal standards perfectionism (PSP; Frost et al., 1990) involves striving for excellence and setting high standards and goals for oneself. It is associated with conscientiousness (Stumpf & Parker, 2000) and is not necessarily maladaptive. On the other hand, evaluative concerns perfectionism (ECP) involves chronic concern about criticism and expectations from others as well as an overly critical evaluation of one's behaviour (Frost et al., 1990). Rather than forming two poles of a continuum, these two core dimensions of perfectionism are distinct, independent factors that can be present in varying degrees in the same individual (Stumpf & Parker, 2000).

In a study of mixed professional performing artists (musicians, actors, and dancers), PSP and ECP were associated with higher performance anxiety (Mor et al., 1995). Furthermore, PSP has been linked to higher effort and higher achievement in young musicians (Kobori et al., 2011; Stoeber & Eismann, 2007). Identifying differences in perfectionism is important as different dimensions may facilitate differing relationships to other psychological factors that may prevent MPA.

Coping, for example, is an additional construct that influences MPA, but is also associated with perfectionism dimensions (e.g., Biasutti & Concina, 2014; Kobori, ~~Yoshie, Kudo, & Ohtsuki~~ et al., 2011). Lazarus and Folkman (1984, p. 141) define coping as “constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person”. ~~Coping is important as it involves an attempt to manage situational demands (Lazarus & Folkman, 1984). Typically, coping is associated with anxiety produced in stressful situations, and in a performance setting, coping may contribute to~~

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~~handling mistakes and failures (Poczwadowski & Conroy, 2002).~~ While many different coping strategies exist to handle stressful situations, a continuum of higher order coping styles have been identified ranging from active (e.g., planning, suppression of competing activities) to avoidant (e.g., withdrawal, giving up, distraction; Endler & Parker, 1994).

Many short-term and long-term adaptive (i.e., increased practice) and maladaptive coping strategies (i.e., use of pharmaceuticals, anxiety) are commonly employed by musicians to control or cope with MPA (Poczwadowski & Conroy, 2002). While coping is an essential and inherent part of musicians' performing craft, it is important to identify ~~which~~ coping strategy ~~ies~~ that are effective for reducing MPA. Langendörfer, ~~Hodapp, Kreutz, and Bongard~~ et al. (2006) and Lehrer, ~~Goldman, and Strommen~~ et al. (1990) both found relationships between MPA and adaptive and maladaptive coping strategies. Interestingly, Kobori et al. (2011) found that reduced performance anxiety was associated with task- and emotion-oriented coping methods linked with an active coping method approach. Musicians who use more avoidant ~~tee~~ coping strategies such as emotion-based and/or less task-based coping generally experience higher MPA (Biasutti & Concina, 2014; Sinden, 1999). Considering the infrequency of catastrophes on stage, it does appear that, overall, musicians are able to cope with MPA (Kenny, 2011), however, greater research is needed to understand how dimensions of perfectionism and coping may interact with MPA.

Researchers have found an association between PSP and task-based, active coping styles (~~Rice & Lapsley, 2001; Kobori et al., 2011;~~ Stoeber & Otto, 2006; Weiner & Carton, 2012). That is, individual with high ~~on~~ PSP might experience an increase in anxiety as a result of striving for perfection, but this negative impact may be offset by the tendency to engage in active, problem-focused coping (Dunkley, ~~Zuroff, & Blankstein~~ et al., 2003; Gniska, ~~Ashby, & Noble~~ et al., 2012). There is no evidence, however, that adaptive coping moderates the relationship between adaptive

perfectionism and anxiety (Dunkley et al., 2003; Gnilka et al., 2012). Alternatively, if an individual has an excessive need for perfectionism in their performance, and also engages in avoidant coping, it is possible that this may lead to be associated with higher MPA.

Evidence for a positive association between ECP and maladaptive coping styles has previously been found (e.g., Gnilka et al., 2012; ~~Wei, Heppner, Russell, & Young, 2006;~~ Weiner & Carton, 2012), with individuals high on ECP being more likely to engage in avoidance coping and less likely to engage in problem-focused coping (Dunkley et al., 2003). There is additional evidence that avoidant coping moderates the relationship between ECP and distress (O'Connor & O'Connor, 2003). While these findings theoretically support the interaction of perfectionism dimensions and coping style on MPA in musicians, greater research is needed to investigate whether adaptive and maladaptive outcomes exist. ~~This study, therefore, aims to understand how perfectionism and coping styles influence MPA in high level classical performing musicians.~~

~~Substantial evidence supports the claim that this population is susceptible to negative mental health outcomes.~~ It is important to understand how perfectionism and coping style influence MPA in high level classical performing musicians. This study, therefore, aims to understand how perfectionism and coping styles influence MPA in high level classical performing musicians this population. Based on the previous findings (Stoeber & Otto, 2006; Weiner & Carton, 2012), ~~it~~ It was ~~therefore~~ hypothesised that PSP would be positively associated with MPA and active coping, ~~and~~ We also hypothesised that ECP would be positively associated with MPA and avoidant coping, based upon the research of Gnilka et al. (2012) and Weiner and Carton (2012). Further, it was hypothesised that the relationship between PSP and MPA would be moderated by active coping. Finally, it was hypothesised that the relationship between ECP and MPA would be moderated by avoidant coping.

Method

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Participants

~~There were 223 participants who initially agreed to participate in the study.~~ Potential participants were targeted from the social media pages of various musical societies and higher education music programs associated with a wide range of instruments (e.g., woodwind, double reed, strings, percussion). Of these initial 223 participants who agreed to participate, 37 were prevented from completing the study as they answered "no" to the question, "Are you a classical performing musician?". A further 68 participants were eliminated from the sample as they did not self-identify as being either an expert or advanced performer, or did not complete all components of the survey. A final cohort of 118 musicians (35 males, 82 females, 1 who identified as other) took part in this study. The mean age was 42 years ($SD = 14.68$; age range = 18 to 76 years). The mean number of years spent musical training was 17.30 ($SD = 6.73$; range: 3-25 years). Of the sample collected, 28 (23.7%) performers self-reported being of advanced level, and 90 (76.3%) participants self-reported being expert or professional.

Measures

An online study questionnaire was used to collect data from a sample of classical performing musicians on variables relating to MPA, perfectionism, and coping. The questionnaire took an average of 12 minutes to complete.

Demographic Questionnaire. Participants were asked to provide information on gender, age, and characteristics relating to music performance. Along with the question, "Are you a classical musician – Yes/No", participants were also asked to self-select "What is your level of expertise" with responses being: beginner, advanced or expert. Participants were also asked, "Please indicate your years of musical training" to which they could provide the number of years.

Performance Anxiety Inventory for Musicians (PerfAIM; Barbeau, 2011, 2017). The PerfAIM is a self-report measure that contains 44 items used for scoring and an additional two

short answer questions that were omitted for this study. Participants rated each item on a 5-point Likert scale from 0 (*not at all*) to 4 (*greatly*), with higher scores indicating higher MPA. An example item is, "I have difficulty concentrating when I am performing". This measure showed excellent reliability with this sample ($\alpha = .97$) and has shown good test-retest reliability, as well as good convergent and divergent validity (Barbeau & Mantie, 2019).

Frost Multidimensional Perfectionism Scale (FMPS; Frost et al., 1990). The FMPS is a widely used measure of multidimensional perfectionism. This scale that measures six dimensions of perfectionism: personal standards, parental expectations, parental criticism, concern over mistakes, doubts about actions, and organisation. ~~Research has shown good convergent validity between the FMPS and other measures of perfectionism (e.g., Frost, Heimberg, Holt, Mattia, & Neubauer, 1993).~~ Similar to other previous research (Dunkley et al., 2000; Weiner & Carton, 2012), the current study used three of the FMPS subscales to measure the two dimensions that best represent the two core forms of perfectionism being investigated. The personal standards subscale with seven (7 items) was used to measure the dimension of PSP and showed adequate scale reliability ($\alpha = .79$). Two subscales, concern over mistakes (nine 9 items) and doubts about actions (four 4 items), were combined to measure ECP and showed excellent reliability ($\alpha = .91$). Items were rated on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), therefore higher scores indicate higher levels of perfectionism. An example item is, "If I fail partly, it is as bad as being a complete failure".

The COPE Inventory (Carver, ~~Scheier, & Weintraub et al.~~, 1989). The COPE Inventory measures a diverse range of coping strategies used to respond to stressful situations. Participants rate how often they use each strategy on a 4-point Likert scale, ranging from 1 (*I usually don't do this at all*) to 4 (*I usually do this a lot*). Previous research has indicated that two of the subscales measure active coping (active coping and planning), and three of the subscales

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measure avoidant coping (mental disengagement, denial, and behavioural disengagement; Dunkley, Ma, Lee, Preacher, & Zuroff et al., 2014). Consequently, only those five subscales were included in the analysis. An example of an active coping item is "I do what has to be done, one step at a time" and an example of avoidant coping is, "I admit to myself that I can't deal with it, and quit trying". Similar to other previous research (e.g., Weiner & Carton, 2012), active coping ($\alpha = .88$) and avoidant coping ($\alpha = .77$) showed good reliability. Furthermore, the scales have good discriminative and convergent validity with other measures of personality (Carver et al., 1989).

Procedure

Ethics for the study was approved from the University of New England Human Research Ethics Committee (Approval No. HE18-112). Participants were recruited through advertisements, which outlined that the study was investigating factors associated with music performance anxiety, specifically targeting classical performing musicians. The advertisements were placed on social media groups for musicians (e.g., *Australasian Double Reed Society*, *Melbourne Orchestras*), higher education music programs (e.g., Sir Zelman Cowen School of Music, Monash University), and provided to the researcher's private contacts via email and social media. All advertising material contained a link that participants clicked on to access the study questionnaire.

Participation provided implied consent to participate in the study before completing the questionnaires. At the conclusion of the survey, participants were thanked for their involvement and invited to participate in a prize draw to win one of six iTunes vouchers with a value of AUD\$25 each.

Results

Statistical Analysis

Data were analysed using SPSS v. 25. Assumption tests were run for all analyses with no major violations detected.

Bivariate Correlation Analyses

In order to assess the relationships between the main study variables, bivariate Pearson’s correlation coefficients were calculated. The results are presented in Table 1 along with the means, standard deviations, and score ranges for each variable. As hypothesised, PSP was positively correlated with MPA and active coping. Likewise, and in support of the second hypothesis, ECP was positively correlated with MPA and avoidant coping. These findings are consistent with previous research (e.g., Dunkley et al., 2003).

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Table 1
Correlations, Means, Standard Deviations, and Score Ranges between the Main Study Variables (N = 118)

	1	2	3	4	5	6	7	8	9
1. Gender	-								
2. Age	.12	-							
3. Years of training	.18	.11	-						
4. Level of expertise	-.13	.14	.29**	-					
5. MPA	.10	-.20*	.20*	.01	-				
6. PSP	.19*	-.07	.18	.07	.22*	-			
7. ECP	.14	-.22*	.14	.07	.64***	.44***	-		
8. Active coping	.19*	.02	.04	-.02	.11	.28**	.03	-	
9. Avoidant coping	-.01	-.21*	.04	.08	.45***	.11	.42***	-.11	-
M	-	42.00	17.30-	-17.30	74.35	27.22	18.88	22.98	26.77
SD	-	14.68	6.73-	-6.73	34.40	4.71	6.09	4.88	5.97
Score range	-	18-100	3-25-	-3-25	13-155	13-35	6.5-32.5	10-32	16-52

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

MPA = Music performance anxiety; PSP = Personal standards perfectionism; ECP = Evaluative concerns perfectionism

Moderation Analysis: Active Coping

A multiple regression moderation analysis was conducted using the Hayes (2017) PROCESS macro model 1 for SPSS to assess if active coping moderated the relationship between PSP and MPA. The moderation model accounted for significant unique variance in musicians' reported performance anxiety, $R^2 = .11$, $F(3, 114) = 4.10$, $p = .008$. The interaction term accounted for a significant 5.5% of the variance in performance anxiety, $F(1, 114) = 4.09$, $p = .046$. The results of the simple slopes analysis (see Figure 1) suggested that when levels of active coping are

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high ($B = 3.79$, $CI[1.49, 6.08]$, $p < .01$), there is a stronger positive relationship between PSP and MPA than at the mean level ($B = 1.75$, $CI[.29, 3.22]$, $p = .020$). When levels of active coping are low, however, PSP has no effect on individuals' experience of MPA ($B = .05$, $CI[-2.32, 2.43]$, $p = .965$).

INSERT FIGURE 1 AROUND HERE

The results of the moderation analysis are presented in Table 2.

Table 2

Moderation Model Coefficients for Personal Standards Perfectionism Predicting Music Performance Anxiety Conditional on Active Coping

Variable	b [LLCI, ULCI]	SE
Constant	236.05 [14.16, 457.16]	112.01
PSP	-6.06 [-14.07, 1.94]	4.04
Active coping	-9.20 [-18.55, .16]	4.72
PSP*Active coping	0.34 [.01, .67]*	0.17

Note. * $p < .05$. Unstandardized coefficients are reported.

LLCI = Lower level confidence interval; ULCI = Upper level confidence interval; PSP = Personal standards perfectionism

Moderation Analysis: Avoidant Coping

A second moderation analysis ~~was conducted to assess~~ whether avoidant coping moderated the relationship between ECP and MPA. The moderation model accounted for significant unique variance in musicians' reported performance anxiety, $R^2 = .46$, $F(3, 114) = 46.49$, $p < .0001$. The interaction term, however, was nonsignificant, $F(1, 114) = 3.11$, $p = .081$.

As can be seen in Table 3, though, both ECP and the use of an avoidant coping strategy were

significantly related to an increase in MPA.

Table 3

Moderation Model Coefficients for Evaluative Concerns Perfectionism Predicting Music Performance Anxiety Conditional on Avoidant Coping

Variable	<i>b</i> [LLCI, ULCI]	<i>SE</i>
Constant	-61.18 [-115.10, -6.36]	27.67
ECP	5.18 [2.87, 7.49]***	1.17
Avoidant coping	2.93 [.58, 5.28]*	1.19
ECP*Avoidant coping	-0.08 [-.17, .01]	0.04

Note. * $p < .05$, *** $p < .001$. Unstandardized coefficients are reported.
ECP = Evaluative concerns perfectionism

Discussion

This study examined perfectionism and coping styles in musicians and their relationship with MPA. Both ~~personal standards~~PSP and ~~evaluative concerns dimensions of perfectionism~~ECP were associated with MPA, but differed in how they related to musicians' coping mechanisms. A small positive relationship was found between PSP and MPA, potentially illustrating that setting higher personal standards is associated with more anxiety about performing. PSP has previously been considered a positive dimension of perfectionism, yet the current positive relationship between PSP and MPA ~~identified in this study opposes~~contradicts previous research that has illustrated no relationship between these variables (Sinden, 1999; Stoeber & Eismann, 2007). This finding potentially supports the claim that the relationship between a performer's expectation of their performance and demand for high quality of performance can lead to increased levels of MPA. A strong association between ECP and MPA highlights that evaluative concerns and doubts

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about actions contributes to experiencing MPA as performers develop anxiety as the importance of the event increases (Kenny et al., 2014; ~~Yoshie et al., 2009~~). This link between ECP and MPA has been established ~~within~~ in previous studies, ~~where establishing the claim that~~ socially prescribed perfectionism ~~(i.e., self-orientated pressures deriving from other people)~~ is related to MPA (Kobori et al., 2011; Mor et al., 1995). These findings demonstrate that both PSP and ECP dimensions are important traits in the context of MPA.

The findings of this study also identified key differences between the dimensions of perfectionism and coping. As predicted, PSP was associated with active coping, suggesting that musicians with higher PSP are more likely to engage in task-oriented coping and work towards their performance goals. ~~This is~~ consistent ~~with the findings of other~~ ~~to~~ ~~with~~ previous research, ~~ers~~ ~~that~~ high personal standards are associated with active coping and increased effort (Kobori et al., 2011; Stoeber & Eismann, 2007). No relationship was found between active coping and MPA. Consequently, active coping appears to be adaptive in regards to producing MPA.

Support was ~~also~~ found for the hypothesis that ECP would have a positive association with avoidant coping. This adds to the body of research demonstrating the connection between evaluative concerns and avoidant coping (~~Dunkley, Blankstein, Halsall, Williams, & Winkworth, 2000~~; Kobori et al., 2011). This finding potentially suggests that musicians who fear mistakes and negative evaluation are more likely to use distraction and denial to cope with their concerns. Furthermore, avoidant coping was associated with higher levels of MPA, indicating that avoidant coping strategies are not adaptive for reducing or eliminating MPA in musicians.

Findings from the moderation analysis indicated that people ~~who have~~ ~~with~~ high PSP ~~tended~~ to experience greater MPA, and, consequently, utilising high and medium levels of active coping does not help facilitate improvements to MPA. It was expected that PSP and task-based, active coping styles may interact to reduce the negative impact of anxiety experienced by

performers (Dunkley et al., 2003; Gnilka et al., 2012). Yet, these findings illustrate that those who actively attempt to improve their MPA with high or medium active coping mechanisms ~~in fact~~ increased the level of anxiety experienced. While not expected, the negative relationship between PSP and active coping to MPA ~~may makes~~ conceptual sense. ~~That is, performers with h~~High PSP ~~performers~~ who initiate active coping mechanisms in order to maintain or strive for excellence ~~as well as through set~~ high standards ~~and or~~ goals ~~for themselves~~ (Frost et al., 1990), may find the challenge or expectations within the task difficult. This may ~~then~~ exacerbate MPA rather than prevent or alleviate their anxiety. ~~In this situation~~ Consequently, the specific approaches used to rectify potential issues in fact facilitate greater ~~levels of~~ anxiety levels because performers worry about the situation and their inefficiencies more than if they ~~had~~ avoided the situation. –

The current study also predicted that individuals with high ECP, and who engaged in avoidance coping, would be more likely to reduce experienced MPA. Flett, ~~Hewitt, Blankstein, Solnik, and Van Brunshot~~ et al. (1996) proposed that socially prescribed perfectionists tend to react to stressful situations with a helpless or hopeless orientation (i.e., the sense that it is impossible to ever reach the standards of perfectionism imposed by others), making them less likely to actively focus on problem-solving. In addition, Gnilka et al. (2012) identified that avoidant coping mediates the relationship between ECP and anxiety. While these studies did not focus on MPA specifically, it was expected that ECP would interact with avoidant coping mechanisms to reduce the MPA experienced by performers. In contrast, this study found that there was no moderating relationship between avoidant coping and ECP on MPA. This lack of interaction suggests that avoidant coping may not be useful in attenuating MPA when people are high in ECP. ~~In contrast, this study found that there was no moderating relationship between avoidant coping and ECP on MPA. Considering ECP and avoidant coping are positively associated, and that both are associated with higher MPA, the lack of interaction suggests they~~

~~may be part of the same underlying mechanism.~~

The ~~positive~~ positive association between the two types of perfectionism and MPA indicates that it is unlikely musicians will experience the benefits of perfectionism without the negative effects. ~~The results imply that~~ Yet, working with musicians to decrease critical self-evaluation tendencies could be important in reducing MPA. It is possible that learning to reframe negative reactions to perceived failures as learning opportunities may help to lessen the impact of perfectionism. ~~Greater research is needed to better inform the best timing for interventions and education. Much~~ Research in this area ~~has~~ has focused on interventions for MPA; however, identifying key moments where MPA is most likely to have a negative impact on a musician's career could inform and maximise the effects of ~~these~~ interventions.

Limitations and Future Directions

~~The current findings demonstrate the positive interactive value of PSP and active coping to MPA, however, no interaction between ECP and avoidant coping to mitigate MPA was found.~~

While the findings of this study are correlational and must be interpreted with caution, it is clear that perfectionism is an important factor to consider as part of a musician's education and any interventions implemented for MPA. ~~Other researchers have shown PSP to be associated with positive outcomes related to effort and achievement (Stoeber & Eismann, 2007), but it is important to note that both PSP and ECP were significantly positively related to MPA in this sample.~~ These results, however, need to be considered in light of the potential limitations ~~of the study.~~

A possible limitation of the study is the development of the composite coping variables. This study utilised Dunkley and Blankstein's (2000) approach of using composite dimensions to identify active and avoidant coping. It is possible that this approach did not accurately reflect the two coping styles, or that the coping measure did not reflect the coping style utilised by the

performing artists. Poczwardowski and Conroy (2002) discuss the fact that coping strategies may differ between populations. It is possible, therefore, that coping measures are needed that more accurately reflect the strategies used by performing artists to better understand the contributing mechanisms of important psychological variables. Future researchers may wish to consider research designs that incorporate targeted measures of coping strategies used by performing artists more specifically.

Another limitation of this study is that the data ~~was~~were collected via self-report measures and may be vulnerable to bias (Meltzoff & Cooper, 2018). ~~Given that the data were cross-sectional and the analyses were correlational, causation could not be inferred. However, i~~It is possible that musicians suffering adverse effects from MPA may be more motivated to participate in studies such as this in the hope of finding solutions. Additionally, ~~the sample self-identified as advanced or expert musicians, indicating that they were representative of the target population; however,~~ given ~~this that participants~~ self-selection~~ed -as advanced or expert musicians,~~ and ~~the fact~~ that there was no objective measure of their status, there is a possibility that these participants exaggerated their capacity as advanced performers. Finally, this study focused specifically on ~~the genre of~~ classical musicians as previous research has suggested ~~the experience of MPA that there is a difference between-between~~ genres ~~with respect to the experience of MPA~~ (Barbeau, 2017; Kenny, 2011). However, information pertaining to either the type of performing ~~that~~ participants engage in or about the type of instruments played was not collected. Differences in MPA have been found between players of different instruments (Kenny, 2011), and this information may have explained some of the variance. Greater research is needed to determine whether different factors such as instrumental differences or performance settings alter these relationships. In addition, future researchers may wish to examine whether the interaction between types of perfectionism and coping strategies differs as a result of musician experience (e.g., student vs.

professional ensemble vs. professional soloists).

Conclusion

The current study aimed to understand how perfectionism and coping styles influence music performance anxiety in a sample of self-identified high-level performing musicians. The results of this study further supports the relationships of personal standards perfectionism and evaluative concerns perfectionism to music performance anxiety and their association with active and avoidant coping styles. Furthermore, while it was proposed that active coping strategies would be beneficial in mitigating music performance anxiety for individuals high in personal standard perfectionism and, likewise, that avoidant coping strategies would assist those high in evaluative concerns perfectionism, the results of the current study did not demonstrate improved music performance anxiety in this sample. Rather, this study the results instead highlights the role that perfectionism plays in music performance anxiety and emphasises the lack of coping strategies that exist to assist with music performance anxiety, and highlights the role that perfectionism plays in these processes. It is therefore important that future research focus on developing interventions and education strategies to promote effective reduce the intensity of music performance anxiety. Although the findings of this cross-sectional study must be interpreted cautiously, the results indicate that reducing fear of mistakes and self-critical evaluations as well as identifying coping strategies that may assist in reducing music performance anxiety is paramount for musicians.

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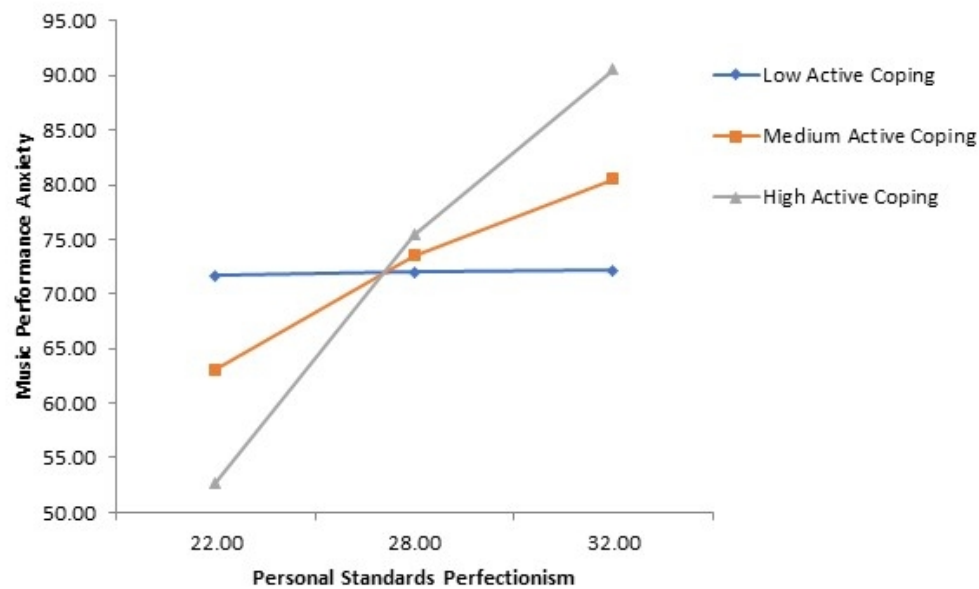
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Simple slopes of the moderating effect of active coping on the relationship between personal standards perfectionism and music performance anxiety.

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