A Systematic Review of Music Performance Anxiety (MPA) Research: Implications for Researchers, Schools of Music Administrators, Music Pedagogues, and PAM Clinicians

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Introduction

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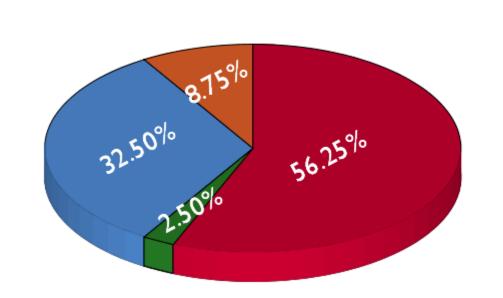
Researchers provide insight into the prevalence rates and experiences of MPA among various musician groups including students. Music educators and schools of music administrators, as well as therapists and counselors, should consider this research when making pedagogic, policy, curricular, and clinical decisions. However, and as noted by Brodsky³⁵ in 1996 and Kenny⁵¹ in 2005, researchers have propagated divergent theoretical orientations for conceptualizing, measuring, and responding to MPA and therefore may present application challenges to various stakeholders. These challenges become critical, particularly for music educators and pedagogues, when theoretical orientations and assessment strategies recognize and confirm the potential for MPA to facilitate musical performance. While researchers continue to investigate MPA, no known recent reviews offer updated insights into the coherence of definitions and theoretical orientations.

The purpose of this study is to systematically review and characterize MPA research according to disciplinary perspectives. This review hypothesizes that there are divergent theories and definitions of MPA across published research articles and that these differences are associated with academic backgrounds of the authors. The specific aims include:

- I. Search and retrieve peer-reviewed articles, dissertations, and reviews on MPA to identify year of publication, academic backgrounds of author(s), type of publication (journal article, dissertations, reviews), and acknowledgment of music educator role.
- 2. Review peer-reviewed articles for definitions of MPA, theoretical orientations, and proposed frameworks/models.
- 3. Compare definitions of MPA, the recognition of facilitative anxiety, and acknowledgement of music educator role across academic

Definitions and theoretical orientations of MPA

Figure 1. Characterization of MPA definitions



More than half of studies (56%) referenced only the maladaptive influence of MPA or used the term "stage fright" as synonymous to MPA. As shown in Figure I, these studies were classified as unidimensional. The second largest group of studies (32.5%) avoided defining MPA. Studies that described or defined MPA as unidimensional but recognized the potential of anxiety to help performance (facilitative anxiety) were considered mixed definitions (8.75%). Only 2.5% provided multidimensional definition of MPA that include both facilitative and debilitative influences.

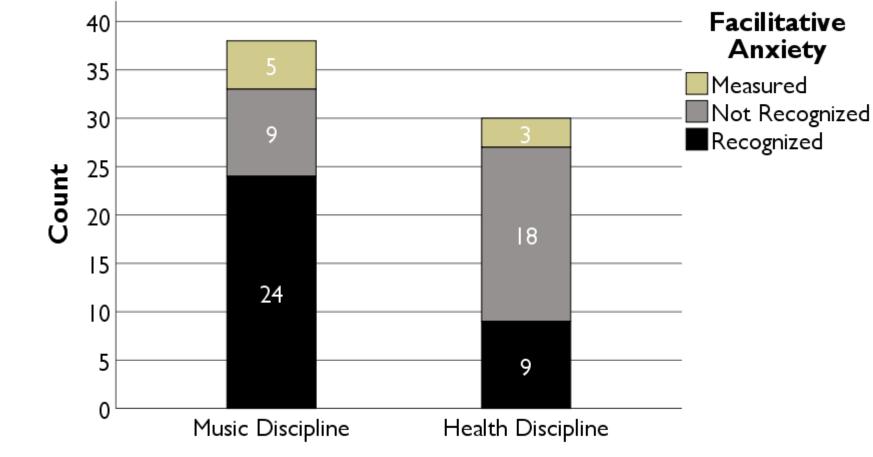
Unidimensional

Mixed

Multidimensional

Avoided Definition

Figure 4. Recognition of Facilitative Anxiety across Academic Backgrounds



- backgrounds of primary authors.
- 4. Compare definitions of MPA across theoretical orientations that recognize facilitative anxiety.

Methods

Several online search engines and databases were used including, Google Scholar, Science & Medicine, ResearchGate, EBSCOhost, ScienceDirect, Oxford Journals, JSTOR, and ProQuest. Studies were retrieved between September 2018 and November 2018. The search terms included the following: music performance anxiety OR cognitive behavior therapy AND musicians OR facilitative music performance anxiety OR performance anxiety OR stage fright OR psychology of music OR anxiety AND performance OR music performance anxiety measurement scales OR MPA AND stage fright.

Peer-reviewed research articles, dissertations, and reviews published between 1971 and 2018 were systematically reviewed. The year of publication were determined from the citation generated by the database. The academic backgrounds of the first authors were identified from the names of the departments or programs found on the title pages, or by searching the internet for the authors' biographies. Studies were searched for any mention of the role of music teachers or educators in influencing MPA. Definitions of MPA were obtained from statements that defined or described MPA. Studies were reviewed for identification of applied theories and frameworks, including the distinction between unidimensional and multidimensional theories and models. Data regarding authors' academic backgrounds, MPA definitions, recognition of facilitative anxiety, and acknowledgment of the role of music educator were imported from an Excel file into SPSS software (SPSS V. 25) and coded as variables for statistical analysis.

Results

The search yielded 28 dissertations, 10 reviews, and 44 journal articles (N=82) published between 1971 and 2018. A total of 36 (43.9%) authors were identified as having an academic background in music and 46 (56.1%) authors were identified as having an academic background in psychology/health. The role of music educator in relation to MPA was acknowledged in 32 (39%) studies, including two reviews, as shown in Table 1.

MPA literature published between 1971 and 2018

Table 1. Journal articles, dissertations, and reviews on MPA

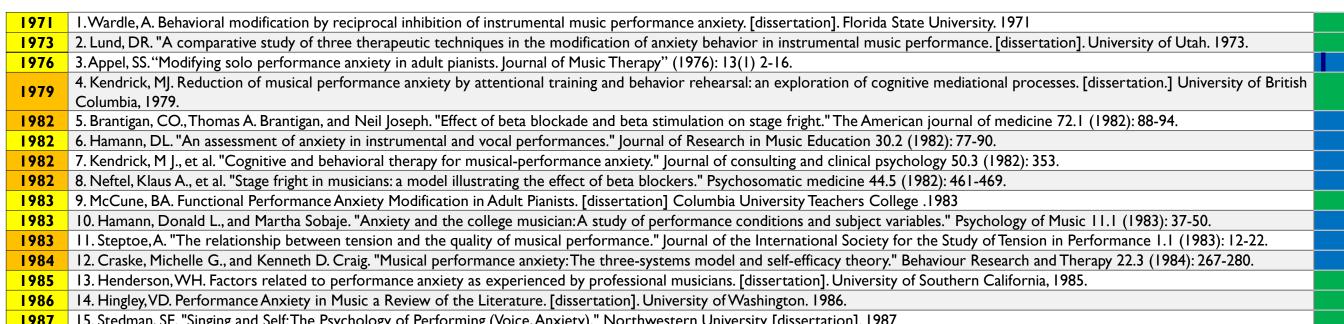
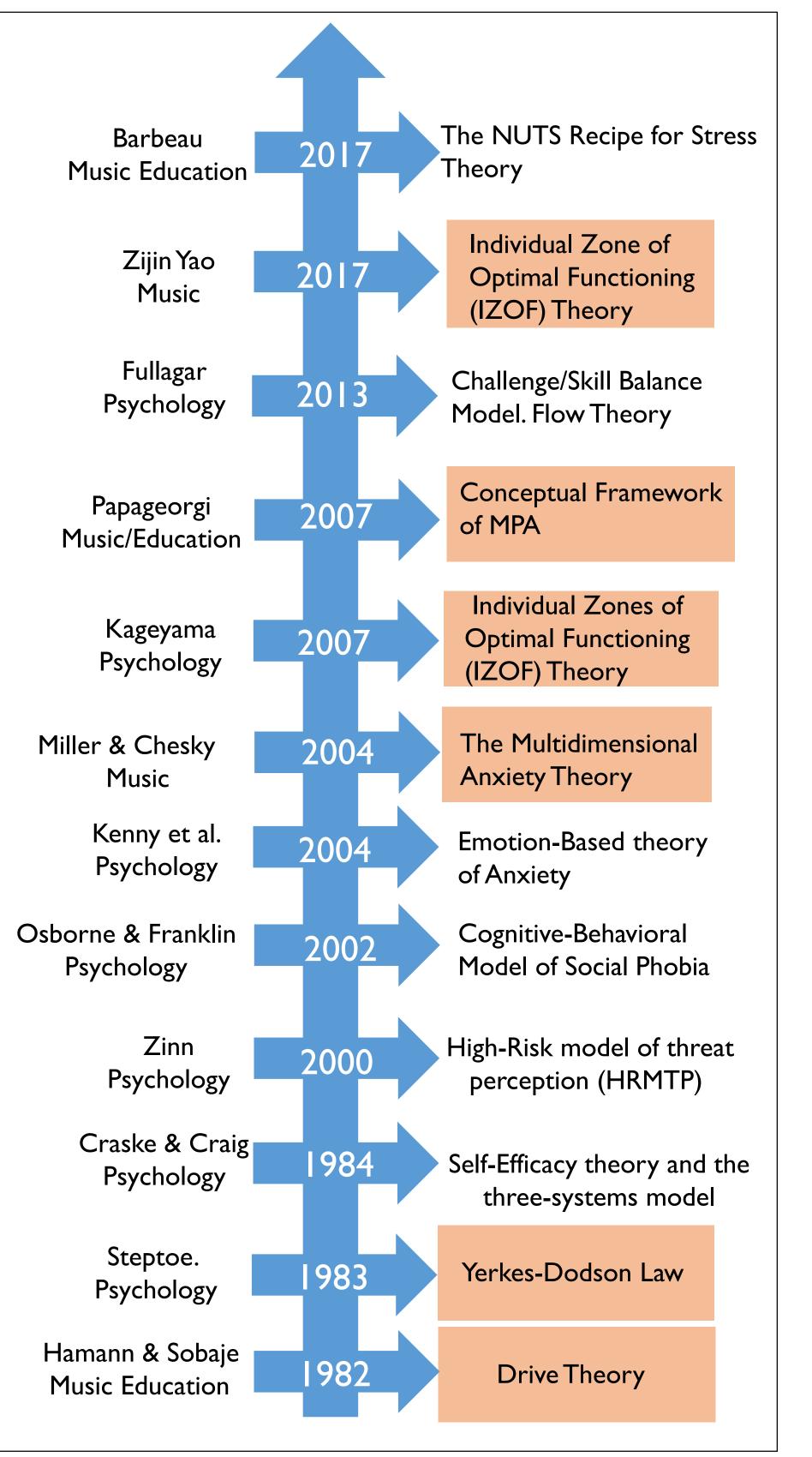


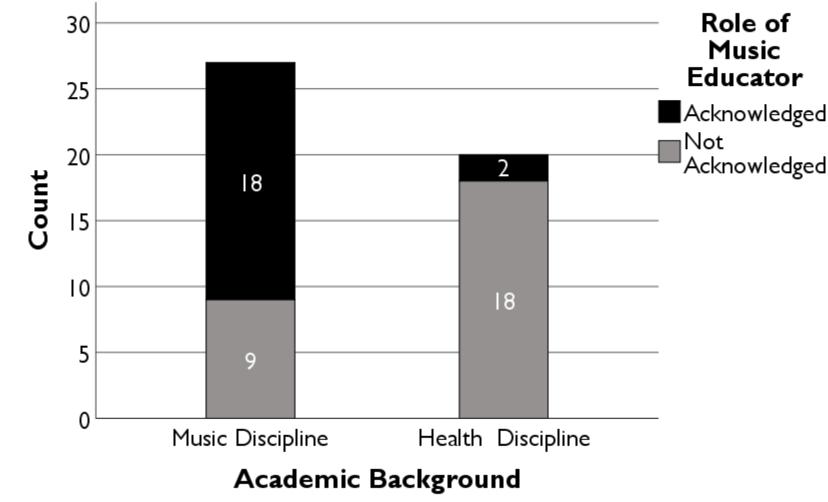
Figure 2. Time line of MPA theories and frameworks



Academic Background

Figure 4 shows that authors with academic backgrounds in music were more likely to recognize the potential of anxiety to facilitate performance ($X^2=9.5$, p<0.01). However, the number of studies that measured facilitative anxiety are limited (N=8).

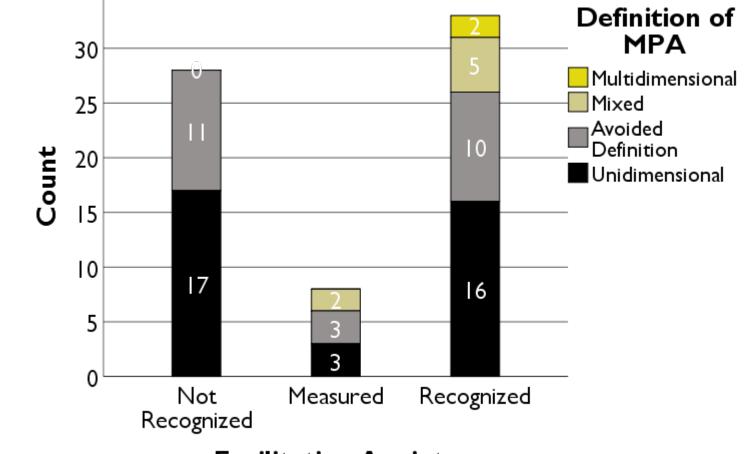
Figure 5. The Relationship between Academic Backgrounds and Acknowledgment of the Role of Music Educator



As shown in Figure 5, studies whose authors have academic backgrounds in music were significantly more likely to acknowledge the role of music teachers in influencing levels of MPA in music students than authors with backgrounds in health disciplines, ($X^2 = 15.09, p < 0.000$).

Comparison of definitions of MPA across recognition of facilitative anxiety

Figure 6. Definitions of MPA and Recognition of Facilitative Anxiety



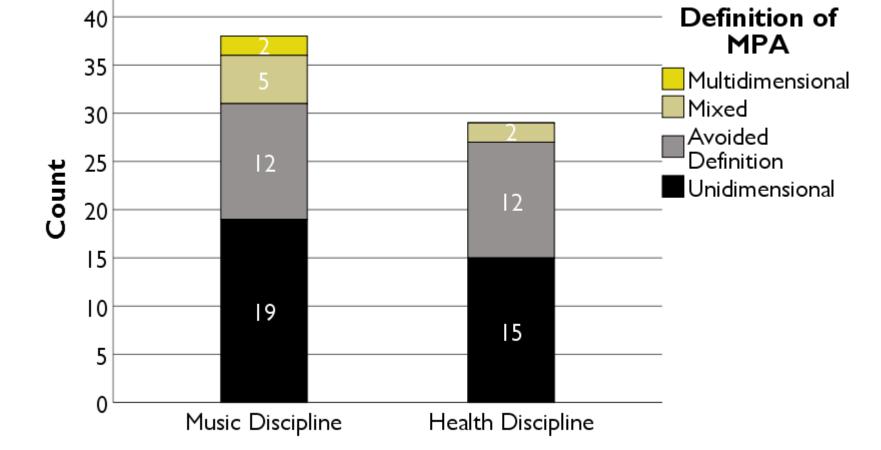
1987	15. Stedman, SE. "Singing and Self: The Psychology of Performing (Voice, Anxiety)." Northwestern University [dissertation]. 1987	Т
1987	16. Steptoe, A, and Helen F. "Stage fright in orchestral musicians: A study of cognitive and behavioral strategies in performance anxiety." British Journal of Psychology 78.2 (1987): 241-249.	
1987	17. Lehrer PM.A review of the approaches to the management of tension and stage fright in music performance. Journal of Research in music Education. 1987 Oct;35(3):143-53.	
1987	18. Wolfe, ML. "Correlates of adaptive and maladaptive musical performance anxiety." Medical Problems of Performing Artists 4.1 (1989): 49-56.	
1989	19. Nagel, JJ, et al. "Cognitive-behavioral treatment of musical performance anxiety." Psychology of lusic 17.1 (1989): 12-21.	
1989	20. Clark DB. Performance-related medical and psychological disorders in instrumental musicians. Annals of Behavioral Medicine. 1989 Mar 1;11(1):28-34.	
1990	21. Abel JL, Larkin KT. Anticipation of performance among musicians: Physiological arousal, confidence, and state-anxiety. Psychology of music. 1990 Oct; 18(2): 171-82.	
1990	22. Wesner, RB., et al. "The occurrence of performance anxiety among musicians." Journal of affective disorders 18.3 (1990): 177-185.	
1990	23. Salmon PG.A psychological perspective on musical performance anxiety: a review of the literature. Medical Problems of Performing Artists. 1990 Mar 1;5(1):2-11.	
1991	24. Gibbons CF. The personality of the performing musician as measured by the Myers-Briggs Type Indicator and the reported presence of musical performance anxiety. [dissertation].	т
	University of Arkansas. 1991	-
1991	25. Clark DB,Agras WS. The assessment and treatment of performance anxiety in musicians. The American journal of psychiatry. 1991 May 1;148(5):598.	
1992	26. Fredrikson, M, and Robert G. "Psychobiology of stage fright: the effect of public performance on neuroendocrine, cardiovascular and subjective reactions." Biological Psychology 33.1 (1992): 51-61.	
1994	27. Tartalone, PM. "Patterns of performance anxiety among university musicians preparing for brass area jury recitals: Physiological arousal and perceived state anxiety." (1994): 0024-0024.23.	
1995	28. Richard, JJ J. The effects of Ericksonian Resource Retrieval on musical performance anxiety. [dissertation]. West Virginia University. 1995.	
1992	29. Skidmore, JB. Musicians' Perception of the Peak Performance and the Related Contributing Factors. [dissertation]. Chicago School of Professional Psychology. 1992.	
1993	30. Cox WJ, Kenardy J. Performance anxiety, social phobia, and setting effects in instrumental music students. Journal of anxiety disorders. 1993 Jan 1;7(1):49-60.	
1994	31.Kee, J. Performance anxiety in violin playing. [dissertation]. University of Illinois at Urbana-Champaign1994	т
1994	32. Brotons, Melissa. "Effects of performing conditions on music performance anxiety and performance quality." Journal of music therapy 31.1 (1994): 63-81.	T
1995		
1995	33. Van K, et al. Performance anxiety among professional musicians in symphonic orchestras: a self-report study. Psychological reports. 1995 Oct;77(2):555-62. 34. Mor S., et al. Perfectionism, control, and components of performance anxiety in professional artists. Cognitive Therapy and Research. 1995 Apr 1;19(2):207-25.	
1996	35. Brodsky W. Music performance anxiety reconceptualized: A critique of current research practices and findings. Medical Problems of Performing Artists. 1996 Jan 1; 11(3):88-98.	T
1997	36. LeBlanc A., et al. Effect of audience on music performance anxiety. Journal of research in music education. 1997 Oct;45(3):480-96.	Т
1998	37. Racy B. Performance anxiety and musicians. The Chicago School of Professional Psychology. [dissertation]. 1998.	т
1999	38. DeForest, GRI. The effects of pedagogical variables on musical performance anxiety. [dissertation] Baylor University 1999	
1999	39. Esplen MJ, Hodnett E. A pilot study investigating student musicians' experiences of guided imagery as a technique to manage performance anxiety. Medical problems of performing artists. 1999 Sep 1; 14:127-32.	
1999	40. Senyshyn Y. Perspectives on performance and anxiety and their implications for creative teaching. Canadian Journal of Education/Revue canadienne de l'education. 1999 Jan 1:30-41.	т
1999	41. Sinden LM. Music performance anxiety: Contributions of perfectionism, coping style, self-efficacy, and self-esteem [dissertation]. Arizona State University, 1999.	T
2000	42. Deen, D R. Awareness and breathing: Keys to the moderation of musical performance anxiety. [dissertation]. 2000.	T
2000	43. Zinn M, et al. Musical performance anxiety and the high-risk model of threat perception. Medical Problems of Performing Artists. 2000 Jun 1;15(2):65-72.	-
2002	44. Osborne MS, Franklin J. Cognitive processes in music performance anxiety. Australian Journal of Psychology. 2002 Aug 1;54(2):86-93.	
2002	45. Kirchner, JM. Performance anxiety in solo piano playing. [dissertation]. University of Oklahoma. 2002.	т
2003	46. Maroon, MT. Potential contributors to performance anxiety among middle school students performing at solo and ensemble contest. [dissertation], 2003.	
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2003 2004 2004 2004 2005 2005 2005 2006 2006 2007 2007 2007 2007	 47. Kokotsaki D, Davidson JW. Investigating musical performance anxiety among music college singing students: A quantitative analysis. Music Education Research. 2003 Mar 1;5(1):45-59. 48. Ryan C. Gender differences in children's experience of musical performance anxiety. Psychology of Music. 2004 Jan;32(1):89-103. 49. Kenny DT, et al. Music performance anxiety and occupational stress amongst opera chorus artists and their relationship with state and trait anxiety and perfectionism. Journal of anxiety disorders. 2004 Jan 1;18(6):757-77. 50. Miller SR, Chesky K. The multidimensional anxiety theory: An assessment of and relationships between intensity and direction of cognitive anxiety, somatic anxiety, and self-confidence over multiple performance requirements among college music majors. Medical Problems of Performing Artists. 2004 Mar 1;19(1):12-22. 51. Kenny DT.A systematic review of treatments for music performance anxiety. Anxiety. Stress, and Coping. 2005 Sep 1;18(3):183-208. 52. McGinnis AM, Milling LS. Psychological treatment of musical performance anxiety: Current status and future directions. Psychotherapy: Theory, Research, Practice, Training. 2005;42(3):357. 53. Osborne MS, Kenny DT. Development and validation of a music performance anxiety inventory for gifted adolescent musicians. Journal of Anxiety Disorders. 2005 Jan 1;19(7):725-51. 54. Thurber, M.R. Effects of heart-rate variability biofeedback training and emotional regulation on music performance anxiety in university students. [dissertation]. University of N. Texas 2006. 55. Kenny DT, Osborne MS. Music performance anxiety: New insights from young musicians. Advances in cognitive psychology. 2006;2(2-3):103-12. 56. Papageorgi, I. Understanding performance anxiety in the adolescent musician. [dissertation]. Institute of Education, University of London. 2007. 57. Kageyama NJ.Attentional focus as a mediator in the anxiety-performance relationship: The	
2003 2004 2004 2004 2005 2005 2005 2006 2006 2007 2007 2007	 47. Kokotsaki D, Davidson JW. Investigating musical performance anxiety among music college singing students: A quantitative analysis. Music Education Research. 2003 Mar 1;5(1):45-59. 48. Ryan C. Gender differences in children's experience of musical performance anxiety. Psychology of Music. 2004 Jan;32(1):89-103. 49. Kenny DT, et al. Music performance anxiety and occupational stress amongst opera chorus artists and their relationship with state and trait anxiety and perfectionism. Journal of anxiety disorders. 2004 Jan;18(6):757-77. 50. Miller SR, Chesky K. The multidimensional anxiety theory: An assessment of and relationships between intensity and direction of cognitive anxiety, somatic anxiety, and self-confidence over multiple performance requirements among college music majors. Medical Problems of Performing Artists. 2004 Mar 1;19(1):12-22. 51. Kenny DT.A systematic review of treatments for music performance anxiety. Anxiety, Stress, and Coping. 2005 Sep 1;18(3):183-208. 52. McGinnis AM, Milling LS. Psychological treatment of musical performance anxiety inventory for gifted adolescent musicians. Journal of Anxiety Disorders. 2005 Jan 1;19(7):725-51. 54. Thurber, M.R. Effects of heart-rate variability biofeedback training and emotional regulation on music performance anxiety in university students. [dissertation]. University of N. Texas 2006, 55. Kenny DT, Development and validation of a music performance relationship. The onhaccement of musicians. Journal of Anxiety Disorders. 2005 Jan 1;19(7):725-51. 54. Thurber, M.R. Effects of heart-rate variability biofeedback training and emotional regulation on music performance anxiety in university students. [dissertation]. University of N. Texas 2006, 55. Kenny DT, Osborne MS. Music performance anxiety: New insights from young musicians. Advances in cognitive psychology. 2006;2(2-3):103-12. 56. Papageorgi, I. Understanding performance anxiety: New insights from young musicians. Advan	
2003 2004 2004 2005 2005 2005 2005 2006 2006 2007 2007 2007 2007 2009	 47. Kokotsaki D, Davidson JW. Investigating musical performance anxiety among music college singing students: A quantitative analysis. Music Education Research. 2003 Mar 1;5(1):45-59. 48. Ryan C. Gender differences in children's experience of musical performance anxiety. Psychology of Music. 2004 Jan;32(1):89-103. 49. Kenny DT, et al. Music performance anxiety and occupational stress amongst opera chorus artists and their relationship with state and trait anxiety and perfectionism. Journal of anxiety disorders. 2004 Jan;18(6):757-77. 50. Miller SR, Chesky K. The multidimensional anxiety theory: An assessment of and relationships between intensity and direction of cognitive anxiety, somatic anxiety, and self-confidence over multiple performance requirements among college music majors. Medical Problems of Performing Artists. 2004 Mar 1;19(1):12-22. 51. Kenny DT. A systematic review of treatments for music performance anxiety: Anxiety, Stress, and Coping. 2005 Sep 1;18(3):183-208. 52. McGinnis AM, Nilling LS. Psychological treatment of musical performance anxiety: current status and future directions. Psychotherapy: Theory, Research, Practice, Training. 2005;42(3):357. 53. Osborne MS, Kenny DT. Development and validation of a music performance anxiety inventory for gifted adolescent musicians. Journal of Anxiety Disorders. 2005 Jan 1;19(7):725-51. 54. Thurber, M.R. Effects of heart-rate variability biofeedback training and emotional regulation on music performance anxiety in university of N. Texas 2006. 55. Kenny DT, Osborne MS. Music performance anxiety: New insights from young musicians. Advances in cognitive psychology. 2006;2(2-3):103-12. 56. Papageorgi, I. Understanding performance anxiety in the adolescent musician. [dissertation]. Institute of Education. University of London. 2007. 57. Kageyama NJ. Attentional focus as a mediator in the anxiety-performance relationship: The enhancement of music performance qua	
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2003 2004 2004 2005 2005 2005 2005 2006 2006 2007 2007 2007 2007 2007 2007	 47. Kokotsaki D, Davidson JW. Investigating musical performance anxiety among music college singing students: A quantitative analysis. Music Education Research. 2003 Mar 1;5(1):45-59. 48. Ryan C. Gender differences in children's experience of musical performance anxiety. Psychology of Music. 2004 Jan;32(1):89-103. 49. Kenny DT, et al. Music performance anxiety and occupational stress amongst opera chorus artists and their relationship with state and trait anxiety and perfectionism. Journal of anxiety disorders. 2004 Jan 1;18(6):757-77. 50. Miller SR, Chesky K. The multidimensional anxiety theory: An assessment of and relationships between intensity and direction of cognitive anxiety, somatic anxiety, and self-confidence over multiple performance requirements for music performance anxiety. Anxiety, Stress, and Coping. 2005 Sep 1;18(3):183-208. 51. Kenny DT. A systematic review of treatments for musical performance anxiety: Current status and future directions. Psychotherapy: Theory. Research, Practice, Training. 2005;42(3):357. 53. Osborne MS, Kenny DT. Development and validation of a music performance anxiety inventory for gifted adolescent musicalins. Journal of Anxiety Disorders. 2005 Jan 1;19(7):725-51. 54. Thurber, M.R. Effects of heart-rate variability biofeedback training and emotional regulation on music performance anxiety in university students. Glasertation]. University of N. Texas 2006. 55. Kenny DT. Osborne MS. Music performance anxiety: New noy musician. Advances in cognitive psychology. 2006;2(2-3):103-12. 56. Papageorgi, I. Understanding performance anxiety in universitan. Justication. Juniversity of London. 2007. 57. Kageyama NJ. Attentional focus as a mediator in the anxiety-performance relationship: The enhancement of music Education. 2007 Nov:26(1):15-25. 59. Slocumb BS. Causes, effects, and solutions to performance-related anxiety: suggestions for the teaching of brass players. [dissertation].	
2003 2004 2004 2005 2005 2005 2005 2006 2006 2007 2007 2007 2007 2007 2009 2009 2010 2011 2011	 47. Kokotsaki D, Davidson JW. Investigating musical performance anxiety among music college singing students: A quantitative analysis. Music Education Research. 2003 Mar 1;5(1):45-59. 48. Ryan C. Gender differences in children's experience of musical performance anxiety. Psychology of Music. 2004 Jan;32(1):89-103. 49. Kenny DT, et al. Music performance anxiety and occupational stress amongst opera chorus artists and their relationship with state and trait anxiety and perfectionism. Journal of anxiety disorders. 2004 Jan 1;18(6):757-77. 50. Miller SR, Chesky K. The multidimensional anxiety theory: An assessment of and relationships between intensity and direction of cognitive anxiety, somatic anxiety, and self-confidence over multiple performance requirements among college music majors. Medical Problems of Performing Artists. 2004 Mar 1;19(1):12-22. 51. Kenny DT.A systematic review of treatments for music performance anxiety. Current status and future directions. Psychotherapy: Theory, Research, Practice, Training. 2005;42(3):357. 53. Osborne MS, Kenny DT. Development and validation of a music performance anxiety inventory for gifted adolescent musicians. Journal of Anxiety Disorders. 2005 Jan 1;19(7):725-51. 54. Thurber, M.R. Effects of heart-rate variability biofeedback training and emotional regulation on music performance anxiety of London. 2007. 55. Kenny DT. Osborne MS. Music performance anxiety: New insights from young musicians. Advances in cognitive psychology. 2006;2(2-3):103-12. 56. Papageorgi, I. Understanding performance anxiety in the adolescent musician. [dissertation]. Institute of Education, University of London. 2007. 57. Kageyama NJ. Attentional focus as a mediator in the anxiety-performance relationship: The enhancement of music performance quality under stress [dissertation]. Indiana University. 2007. 59. Slocumb BS. Causes, effects, and solutions to performance-related anxiety: suggestions for	
2003 2004 2004 2005 2005 2005 2005 2006 2006 2007 2007 2007 2007 2007 2007	 47. Kokotsaki D, Davidson JW. Investigating musical performance anxiety among music college singing students: A quantitative analysis. Music Education Research. 2003 Mar 1;5(1):45-59. 48. Ryan C. Gender differences in children's experience of musical performance anxiety. Psychology of Music. 2004 Jan 32(1):89-103. 49. Kenny DT, et al. Music performance anxiety and occupational stress amongst opera chorus artists and their relationship with state and trait anxiety and perfectionism. Journal of anxiety disorders. 2004 Jan 1;18(6):757-77. 50. Miller SR, Chesky K. The multidimensional anxiety theory: An assessment of and relationships between intensity and direction of cognitive anxiety, somatic anxiety, and self-confidence over multiple performance requirements among college music majors. Medical Problems of PerformingArtists. 2004 Mar 1;19(1):12-22. 51. Kenny DT.A systematic review of treatments for music performance anxiety. Anxiety, Stress, and Coping. 2005 Sep 1;18(3):183-208. 52. McGinnis AM, Milling LS. Psychological treatment of musical performance anxiety inventory for gifted adolescent musicians. Journal of Anxiety Disorders. 2005 Jan 1;19(7):725-51. 54. Thurber, M.R. Effects of heart-rate variability biofeedback training and emotional regulation on music performance anxiety in university students. [dissertation]. University of Nones. 2005. 55. Kenny DT, Osborne MS. Music performance anxiety: New insights from young musicians. Advances in cognitive psychology. 2006;2(2-3):103-12. 56. Rapageorgi, I. Understanding performance anxiety: Networksical, [dissertation]. Insitute of Education. University of London. 2007. 57. Kageyama NJ, Attentional focus as a mediator in the anxiety-performance relationship: The enhancement of music performance quality under stress [dissertation]. Indiana University. 2007. 58. Taborsky C. Musical performance anxiety: A review of literature. Update: Applications of Research in Music	
2003 2004 2004 2005 2005 2005 2005 2006 2007 2007 2007 2007 2007 2007 2009 2009	 47. Kokotsaki D, Davidson JW. Investigating musical performance anxiety among music college singing students: A quantitative analysis. Music Education Research. 2003 Mar 1;5(1):45-59. 48. Ryan C. Gender differences in children's experience of musical performance anxiety. Psychology of Music. 2004 Jan 32(1):89-103. 49. Kenny DT, et al. Music performance anxiety and occupational stress amongst opera chorus artists and their relationship with state and trait anxiety and perfectionism. Journal of anxiety disorders. 2004 Jan 1:18(6):757-77. 50. Miller SR, Chesky K. The multidimensional anxiety theory: An assessment of and relationships between intensity and direction of cognitive anxiety, somatic anxiety, and self-confidence over multiple performance requirements among college music majors. Medical Problems of PerformingArtists. 2004 Mar 1:19(1):12-22. 51. Kenny DT.A systematic review of treatments for music performance anxiety. Anxiety. Stress, and Coping. 2005 Sep 1:18(3):183-208. 52. McGinnis AM, Milling LS. Psychological treatment of musical performance anxiety inventory for gifted adolescent musicians. Journal of Anxiety Disorders. 2005 Jan 1:19(7):725-51. 53. Osborne MS, Kenny DT. Development and validation of a music performance anxiety inventory for gifted adolescent musicians. Journal of Anxiety Disorders. 2005 Jan 1:19(7):725-51. 54. Thurber, M.R. Effects of heart-rate variability biofeedback training and emotional regulation on music performance anxiety is outdone. 2007. 55. Keapeyama NJ. Attentional focus as a mediator in the anxiety-performance relationship: The enhancement of music performance quality under stress [dissertation]. Indiana University. 2007. 58. Taborsky C. Musical performance anxiety: Neuro Of Research in Music Education. 2007 Nov;26(1):15-25. 59. Slocumb BS. Causes, effects, and solutions to performance-related anxiety: suggestions for the teaching of brass players. [dissertation]. The Uni	
2003 2004 2004 2005 2005 2005 2005 2006 2006 2007 2007 2007 2007 2007 2007	 47. Kokotsaki D, Davidson JW. Investigating musical performance anxiety among music college singing students: A quantitative analysis. Music Education Research. 2003 Mar 1;5(1):45-59. 48. Ryan C. Gender differences in children's experience of musical performance anxiety. Psychology of Music. 2004 Jan 32(1):89-103. 49. Kenny DT, et al. Music performance anxiety and occupational stress amongst opera chorus artists and their relationship with state and trait anxiety and perfectionism. Journal of anxiety disorders. 2004 Jan 1;18(6):757-77. 50. Miller SR, Chesky K. The multidimensional anxiety theory: An assessment of and relationships between intensity and direction of cognitive anxiety, somatic anxiety, and self-confidence over multiple performance requirements among college music majors. Medical Problems of PerformingArtists. 2004 Mar 1;19(1):12-22. 51. Kenny DT.A systematic review of treatments for music performance anxiety. Anxiety, Stress, and Coping. 2005 Sep 1;18(3):183-208. 52. McGinnis AM, Milling LS. Psychological treatment of musical performance anxiety inventory for gifted adolescent musicians. Journal of Anxiety Disorders. 2005 Jan 1;19(7):725-51. 54. Thurber, M.R. Effects of heart-rate variability biofeedback training and emotional regulation on music performance anxiety in university students. [dissertation]. University of Nones. 2005. 55. Kenny DT, Osborne MS. Music performance anxiety: New insights from young musicians. Advances in cognitive psychology. 2006;2(2-3):103-12. 56. Rapageorgi, I. Understanding performance anxiety: Networksical, [dissertation]. Insitute of Education. University of London. 2007. 57. Kageyama NJ, Attentional focus as a mediator in the anxiety-performance relationship: The enhancement of music performance quality under stress [dissertation]. Indiana University. 2007. 59. Slocumb BS. Causes, effects, and solutions to performance-related anxiety: suggestions for the teaching of	

Recognition of facilitative anxiety

Nine theories and two frameworks were identified. As highlighted in Figure 2, six studies included theories and frameworks that reference the multidimensionality of anxiety. Among these studies, four theories were applied by authors with academic backgrounds in music. The remaining studies applied unidimensional theories.

Comparison of theoretical orientations across academic backgrounds

Figure 3. Definitions of MPA and Academic Backgrounds



Facilitative Anxiety

No significant difference between types of definitions and recognition of facilitative anxiety was found in MPA literature. This result suggests inconsistency of definitions, and confusion in conceptualizing of MPA. For example, Figure 6 shows that some studies did recognize the potential of MPA to be facilitative, but they still defined it as only debilitative (unidimensional). Table 2 shows examples of type of definitions used and statements that recognized facilitative anxiety.

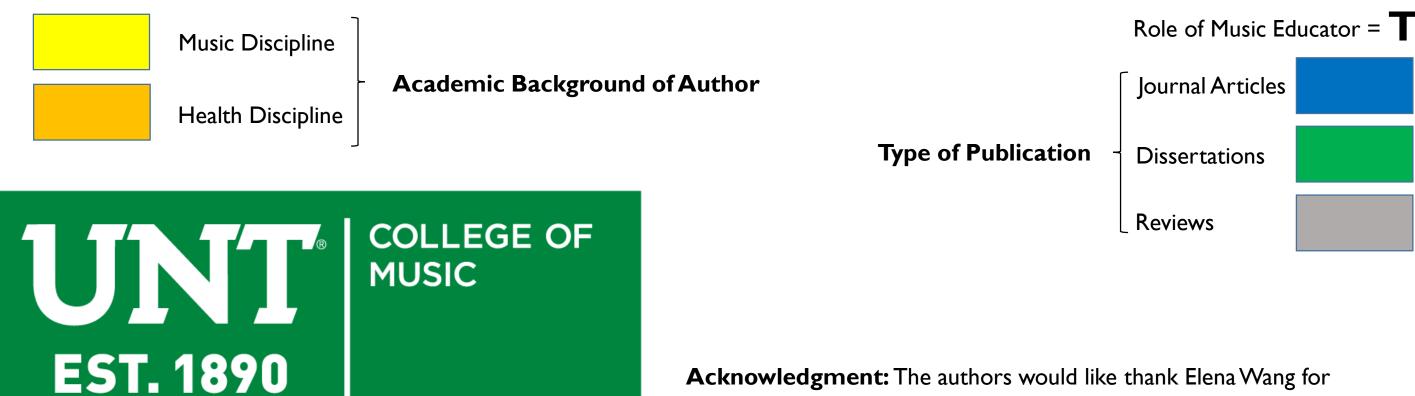
Table 2. Statements used in MPA definition and recognition of **Facilitative Anxiety**

Year	Author	Type of Definition of MPA	Recognition of Facilitative Anxiety
1985	Henerson	"In this study, the terms 'performance anxiety' and 'stage fright' will be used synonymously."	"Not all aspects of anxiety are bad."
1987	Wolfe	"Performance anxiety, or 'stage fright,' has long been one of the most disabling health problems"	"Both facilitating (adaptive) and debilitating (maladaptive) trait anxiety were measured"
1987	Steptoe	"Musical performance anxiety is also a useful model for the study of specific fear"	"The arousal needed for a good performance i not anxiety, but a state of moderate physical excitement."
1994	Brotons	"Performance anxiety, also known as stage fright, is a serious, debilitating problem"	"Some stress (adaptive anxiety) appears to be necessary to reach peak performances"
1999	Senyshyn	Avoided definitions	"Excitement is merely a form of anxiety that is expressed positively."

Conclusion

This is the first known quantitative review of MPA literature. The analyzed data provided important insights regarding the status of the current MPA literature. The hypothesis that theoretical orientations were associated with academic background of authors was confirmed in this review. Although MPA literature has developed significantly in recent years, the current MPA literature is inconsistent regarding the multidimensionality of MPA since Brodsky's review in 1996. With growing evidence that supports the multidimensionality of MPA, future studies should include facilitative anxiety when conceptualizing, measuring, adopting theories, or developing measurement scales for MPA. As noted by McGinnis and Milling (2005) and as shown in this review, there is a need for health researchers to collaborate with music researchers in order to reduce the inconsistency of definitions and theoretical orientations.

2015	68. Seker SS. The Validity and Reliability of the Musical Performance Anxiety Scale. European Scientific Journal, ESJ. 2015 Dec 29;11(34).
2015	69. Braden AM, Osborne MS, Wilson SJ. Psychological intervention reduces self-reported performance anxiety in high school music students. Frontiers in psychology. 2015 Mar 3; 6:195.
2015	70. Nicholson DR, Cody MW, Beck JG. Anxiety in musicians: On and off stage. Psychology of Music. 2015 May;43(3):438-49.
2015	71. Robson, KE. Safety in numbers: the prevalence and nature of music performance anxiety in non-music major undergraduates in ensemble rehearsals and concerts. [dissertation]. Boston
2013	University. 2015.
2015	72. Kenny D, Ackermann B. Performance-related musculoskeletal pain, depression and music performance anxiety in professional orchestral musicians: a population study. Psychology of Music.
2013	2015 Jan;43(1):43-60.
2016	73. Bannai K, Kase T, Endo S, Oishi K. Relationships among performance anxiety, agari experience, and depressive tendencies in Japanese music students. Medical problems of performing
	artists. 2016 Dec 1;31(4):205-10.
2017	74. Yao, Z. Subjective Experiences of Anxiety in Optimal Performance an Application of the Individual Zone of Optimal Functioning (IZOF) Theory in Music Performance Anxiety Issues. The
	University of Wisconsin-Madison, 2017.
2017	75. Guven E. Levels of music performance anxiety and test anxiety of Turkish prospective music teachers in piano exams. International Journal of Music Education. 2017 May;35(2):154-64.
2017	76. Barbeau, AK. Is performing music soothing or stressful? Two perspectives: Music performance anxiety among musicians and the effect of active music-making on seniors' health.
	[dissertation]. McGill University, 2017.
2018	77. Ioannou CI, et al. Epidemiology, Treatment Efficacy, and Anxiety Aspects of Music Students Affected by Playing-Related Pain. Med Probl Perform Art. 2018;33(1):26-38.
2018	78. Susić, Blaženka Bačlija. "The Relation Between Pedagogical Approaches in Music Education and Students' Performance Anxiety." Revija za Elementarno Izobrazevanje 11.2 (2018): 143-157.
2018	79. Topoğlu, O., et al. "General Health Status, Music Performance Anxiety, and Coping Methods of Musicians Working in Turkish State Symphony Orchestras: A Cross-Sectional Study." Medical
2010	problems of performing artists 33.2 (2018): 118-123.
2018	80. Sabino AD, Camargo CM, Chagas MH, Osório FL. Facial recognition of happiness is impaired in Musicians with high Music Performance anxiety. Frontiers in psychiatry. 2018 Jan 25; 9:5.
2018	81. Nielsen C, et al. The relationship between music performance anxiety, subjective performance quality and post-event rumination among music students. Psychology of Music. 2018
2010	Jan;46(1):136-52.
2018	82. Cohen S, Bodner E. Music performance skills: A two-pronged approach–facilitating optimal music performance and reducing music performance anxiety. Psychology of Music. 2018.



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Academic Background

As shown in Figure 3, no significant differences were found when comparing definitions of MPA across music and health disciplines (X^2 = 2.59, p=0.46). Authors from both music and health backgrounds are inconsistent regarding definitions of MPA. While 2 studies by authors with music backgrounds used multidimensional definitions, no authors with health backgrounds recognized this perspective.

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Nabeel began his classical guitar training in 1989 at the National Conservatory of Syria in his hometown of Damascus. In 2003, he won the Moyen-Guitare lère Mèdaille Ascendante competition from the National Conservatory of Jordan in collaboration with the Conservatoire National de Region Ville de Boulogne-Billancourt, France. Nabeel earned a Bachelor's degree in Environmental and Applied Geology in 2005 from the University of Jordan in Amman while performing and teaching classical guitar. In 2017, he earned his Master's Degree (MM) from UNT in classical guitar performance under Professor Thomas Johnson with a related field in performing arts health with Professor Kris Chesky. Nabeel was awarded a Research Fellowship (2017-2019) and is currently pursuing a PhD in Music with Concentration in Performing Arts Health



It is worth mentioning that statements regarding personal perceptions and attitudes, as reflected in Table 3, can influence how researchers approach this challenge.

Table 3. Examples of Attitudes towards Collaboration across Disciplines

Year	Author	Attitudes
1982	Kendrick	"It certainly would be easier to teach music teachers what they need to know about attentional training than to teach psychologists what they would need to know about music!"
2005	McGinnis and Milling	"Finally, psychotherapists who work with clients experiencing musical performance anxiety may find it helpful to have had musical training themselves. Psychotherapists lacking such training may wish to consult with a professional musician (e.g., a music professor or certified music teacher) to better understand the technical challenges involved in musical performance."

